APPENDIX II

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Appendix II-A

SENATE CONCURRENT RESOLUTION (SCR)- 15

COMMITTEE SUBSTITUTE

FOR

SENATE CONCURRENT RESOLUTION NO. 15

(By Senators Hunter, Foster, Kessler, Minard,

Oliverio, White, Unger and Wells)

[Originating in the Committee on Energy, Industry and Mining;

reported February 23, 2007.]

Requesting the Joint Committee on Government and Finance study the effects of underground injection of coal slurry on human health and the environment.

Whereas, The underground injection of coal slurry is an accepted method of coal slurry disposal for which the Department of Environmental Protection issues permits; and
Whereas, The most recent information on the effects of underground injection of coal slurry available to the Legislature indicates the potential for harmful effects; and
Whereas, The effects of the underground injection of coal slurry may present serious public health and environmental questions; therefore, be it
Resolved by the Legislature of West Virginia:
That the Joint Committee on Government and Finance is hereby requested to study the effects of underground injection of coal slurry on human health and the environment; and, be it
Further Resolved, That the Department of Environmental Protection and the Bureau for Public Health shall jointly design and conduct, or contract to have conducted, a comprehensive study on the effects of underground injection of coal slurry, including the following:
(1)An analysis of the chemical composition of coal slurry, including an inventory of organic and inorganic compounds;
(2)A hydrogeological study of the migration of coal slurry or its constituent contaminants from injection wells into the ground waters or surface waters of West Virginia;
(3)An analysis of the effects of the coal slurry and its constituent contaminants on human health;
(4)A study of the effects of coal slurry and its constituent contaminants on public health in communities where it is determined that coal slurry or its constituent contaminants have migrated into ground waters currently or historically used for domestic purposes;
(5)An environmental assessment of the effects on surface water and aquatic ecosystems of the migration of coal slurry or its constituent contaminants into surface waters; and
(6)Any other considerations that the Department of Environmental Protection and the Bureau for Public Health deem to be important; and, be it
Further Resolved, That the Department of Environmental Protection and the Bureau for Public Health ensure, through multiple sampling dates and locations, that the resulting data identify possible regional variation in the contents of coal slurry and collect samples of sufficient quantity to provide testable

quantities; and, be it
Further Resolved, That the Department of Environmental Protection shall submit its findings for evaluation by the Bureau for Public Health and report to the Joint Committee on Government and Finance on its findings, conclusions and recommendations on or before December 31, 2007; and, be it
Further Resolved, the Bureau for Public Health report to the Joint Committee on Government and Finance on its findings, conclusions and recommendations on or before December 31, 2008; and, be it
Further Resolved, That the Department of Environmental Protection and the Bureau for Public Health prepare and submit a request to the Joint Committee on Government and Finance setting forth the anticipated time necessary to conduct each phase of the study and, if any funds in addition to the current amounts appropriated to the Department of Environmental Protection and the Bureau for Public Health may be necessary to carry out the study required herein, a specific proposal for additional funds; and, be it
Further Resolved, That the expenses necessary to conduct this study, to prepare reports and to draft necessary legislation be paid from legislative appropriations to the Joint Committee on Government and Finance.

Appendix II-B

LISTINGS OF COAL SLURRY SITES IN WEST VIRGINIA

Site	PERMITTEE	APPLICATION #	ARTICLE 3	NPDES	COUNTY	Latitude	Longitude	Deep Mine	Seam
1	Black Wolf	1018-06-047	D012782	WV1006029	McDowell	37-21-03	81-30-31	Mine No. 22B	Poca 3
2	Brooks Run Mining	0802-04-101	U200401	WV0060194	Webster	38-28-43	80-37-53	Mercer Deep Mine	Upper Mercer
3	Coresco, Inc.	1127-07-061	O008283	WV1002619	Monongalia	39-42-22	79-57-56	J & J No. 4	Redstone
4	Eagle Energy	0196-98-005	U003483	WV0025607	Boone	37-56-53	81-39-08	Powellton Deep	Powellton
5	Gatling Coal	1014-06-053	O301905	WV1021958	Mason	38-58-06	81-56-24	Phillip Sp	Pittsburgh
6	ICG Beckly	1074-07-081	U301195	WV1015052	Raleigh	37-46-18	81-15-48	Bayer Dee	Beckley
7	Independence Coal Co.	0326-01-005	U511486	WV1004140	Boone	38-00-56	81-45-15	Quinland	No. 2 Gas
8	Kanawha Eagle Coal, LLC	0615-03-039	U017983	WV0002569	Boone & Kanawha	38-09-16	81-37-18	Morton M	Eagle
9	Power Mountain	0199-99-067	O000285 U000785	WV0090603	Nicholas	38-18-12	81-00-02	Flying an	Eagle
10	Power Mountain	0597-03-067	O000285 U000785	WV0090603	Nicholas	38-17-33	81-02-11	Winifrede	Winifrede
11	Remington,LLC	0325-00-005	H035400 U008083	WV1015265	Kan/Boone	38-05-26	81-31-43	Stockburg	Coalburg
12	Rockspring Development	0527-02-099	U002584	WV0041734	Wayne	38-09-21	82-20-23	Camp Cre	Winifrede
13	Southern Minerals	0444-02-047	O007982	WV0048437	McDowell	37-25-06	81-32-26	Poca 3 de	Poca 3

Site	PERMITTEE	APPLICATION #	ARTICLE 3	NPDES	COUNTY	INJ/ SEAM	Latitude	Longitude
1	Bandmill Coal Corp.	0321-00-045	P071800 R74900	WV0093211	Logan	slr/2Gs (Egl)	37 48 51	81 54 23
2	Brooks Run Mining	0198-99-101	P612 UO0516	WV0050857 WV0050911	Webster	slr/LKtng	37 19 59	81 32 31
3	Brooks Run Mining	0732-04-101	P612 U200493	WV0050857 WV1013793	Webster	slr/Ltng	38 31 08	80 38 07
4	Carson One Mining, LLC	0986-06-097	U200101 O000484		Upshur	slr/UFpt	38 54 47	80 17 14
5	Coastal Coal	0529-02-101	U101991 U200493 U200593	WV1010506 WV1013793	Webster	slr/LKtng	38 30 18	80 38 01
6	Delbarton Mining	0336-01-059	O015683	WV1003674	Mingo	slr/AlmaDrpr	37 45 02	82 10 13
7	Eastern Associated Coal Corporation	0576-03-005	H453 O001383 O007282 U002083	WV0038253	Boone	slr/Egl	37 48 22	81 35 57
8	Elk Run Coal Company	0400-01-005	P047000	WV0050903	Boone	slr/UCdrGrv	38 00 29	81 34 18
9	Glady Fork Mining, Inc.	0644-03-097	O000484	WV0027031	Upshur	slr/UFpt	38 54 17	80 17 14
10	Hampden Coal Co., Inc.	1228-08-059	O501388	WV1004760	Mingo	slr/2Gs	37 39 33	81 57 20
11	Herndon Processing Company, LLC	0454-02-109	O007882	WV0001848	Wyoming	slr/Pca3	37 31 07	81 21 47

12	Independence Coal	1062-07-005	U511486 U005783 U002685 O505788	WV1004140 WV1003887 WV0096199 WV0093076	Boone	slr/Pwlltn	38 00 59	81 45 18
13	Jupiter Holdings (Dakota)	0614-03-005	U503296	WV1016946	Boone	slr/2Gs (CdrGrv)	37 56 19	81 42 36
14	Loadout, LLC (Fork Creek)	0292-00-005	O502198	WV1020005	Boone	slr/Cdrgrv	38 12 38	81 46 44
15	Omar Mining	0227-99-005	H212 H396 O501992 O509588	WV0056332	Boone	slr/Pltn	38 00 59	81 45 18
16	Panther LLC	0308-00-039	UO00391	WV0048101	Kanawha	slr/2Gs	38 09 51	81 28 05
17	Siata Equipment Co.	0421-01-039	O300695	WV0094099	Kanawha	slr/	38 10 48	81 29 08
18	Wolf Run Mining Co.	1197-08-097	U200201	WV1018116	Upshur	slr/MKtng	38 54 10	80 11 37

Company name	Mine name	County	Permit numbers	Slurry amount	well latitu	well longit	start date	end date i
Amherst Coal	Paragon Mine	Logan	WV0053163, NDP	360,000,000	37 49 14	81 50 54	1984	1986
Arch of West Virg	Macgregor Prep Plant	Logan	WV0066346	NA	37 48 55	81 50 13		
Arch of West Virg	Paragon Mine	Logan	WVS470455646	308 TPD	37 48 55	81 53 43	1975	
Badger Coal	#13 mine	Barbour	P-5950-78		39 09 44	80 01 06		
Badger Coal	Mine #10	Barbour	WVS470015001, R-649		39 10 14	80 00 56		1962
Bethlehem mines	Racoon #1	Kanawha	WV25304-5791	576,000 g/day	38 00 05	81 27 15		
Bethlehem Mines	Shamrock No. 111	Kanawha	WVS470395005		38 02 30	81 27 30	Mid. 60s	
Big Bear Coal		Logan	46-02829		37 47 10	81 40 45		
Buffalo Mining Co	No. 5A Mine	Logan	WVS470455004	NA	37 48 56	81 40 26		
Cannelton Indust	mine 105/115 complex	Kanawha	d-127, U55-84, wv	234,125,000	38 11 46	81 19 49	1984	1986
Cannelton Indust	mine 105/115	Kanawha	u-55-84, wv00636	210,000,000	38 11 15	81 20 26	1985	1986
Capitol Fuels	No. 5	Kanawha	P5871-76, D8512		38 07 30	81 24 00	1977	1983
Capitol Fuels Inc	#5 mine	Kanawha	U-178-83, WV0066133, D-8512		38 07 30	81 23 59	1980	1983
Consolidation Co	Robinson Run #95	Harrison	U-104-83, wv0004	173,700,000	39 27 08	80 23 54	1980	1986
Consolidation Co	Shoemaker mine, Ireland m	Marshall	WVS470515001		40 01 30	80 42 43		
Cowaco Inc.		Clay	WV1000969		38 27 09	80 53 22		
Dehue Coal Company		Logan	WVS470455002	NA	37 48 58	81 54 51		
Eastern Associat	Federal #1	Marion	O-24-83		39 33 15	80 10 22		
Eastern Associat	Kopperston 1and 2	Boone	WV006669	NA	37 48 24	81 35 46		
Elkay Mining Co.	MacBeth Mine, Rum Creek	Logan			37 48 54	81 54 21		
Enoxy Coal Com	Ragland Mine	Mingo	WVS470595786,	NA	37 41 09	82 05 31		
Enoxy Coal Com	Holden No. 22 Mine	Logan	WVS470455998	812 TPD 25/75	37 45 02	82 04 57	1980	
Farmington Project		Marion		86,000	39 31 25	80 14 57	1977	1978
Green Valley Coal		Nicholas	WV0002976, P-6080-80		38 15 18	80 41 16		
Imperial Colliery	No. 11, 1, 4, and 20	Kanawha	WVS470395936	40 tons per day	38 04 43	81 26 24	1966	1984
Island Creek Coa	North Branch #1	Grant	d-64-66, m-100, 0	122,400,000	39 15 51	79 20 36	1980	1981
Island Creek Coa	Tiaga#1	Nicholas		40,118,000	38 25 31	80 42 41		
Island Creek Coa	Holden #24	Mingo	WV001503		37 41 23	82 05 44	1981	
Island Creek Coa	Henry Mine (Davis Coal and	Grant	MDP 6336-81, P-6138-81		39 13 19	79 25 46		
Island Creek Coa	Emmons Mine	Grant	p-6137-81, MDP 6336-81		39 15 45	79 20 49		
Island Creek Coal		Grant		119 tons/day	39 13 04	79 20 49	Jun-71	
Island Creek Coa	Holden No. 29 Coal Prep Fa	Logan	Rec. Permit # P-	130,000 tons	37 48 10	82 05 14	1980	1981
Island Creek Coa	Guyan No. 5 Coal Preparati	Logan	Rec. Permit # P-	112,000 tons	37 50 55	81 46 52	1980	1982
Island Creek Coa	Holden No. 2 Prep Plant	Logan		500 gpm	37 48 15 37 48 09 37 48 10	82 04 57 82 05 10 82 08 10		

Island Creek Coa	Guyan No. 5 Mine	Logan	P-4285	182 tons/day at 2	37 50 54 37 50 56	81 47 24 81 47 36	1970	
Island Creek Coa	Island Creek No. 24	Logan	5786	1262.8 tons/day	37 42 01 37 42 00	82 07 24 82 07 10		
Island Creek Coa	Island Creek No. 21	Logan	5645	308TPD (25% s	37 48 09 37 48 05 37 47 57 37 49 05	82 05 10 82 05 22 82 36 20 82 05 12	1975	
Island Creek Coa	Island Creek No. 22 Prep P	Logan	P-5998	812TPD 25% Sc	37 45 01	82 04 57	1980	
Island Creek Coa	Tioga No. 1 Mine	Nicolas	WVS470675001	NA	38 23 08	80 43 37		
Island Creek Coa	Guyon No. 5 Mine	Logan	WVS470454285	NA	37 50 54 37 50 56	81 47 24 81 47 36		
Kermit Coal Co.	No. 1 Mine	Mingo	P-5906-77, P-480, R-520, WV-	29520000 gallon	37 49 40	82 22 55	1980	1981
Kermit Coal Com	No. 1 Mine	Mingo	P-5906-77 P-6214-82 P-480 R-	94536000 millior	37 49 40	82 22 55	1980	1986
Kitt Energy Corp	Kitt #1 mine	Barbour	D-8488, D-10783, WV0043273, P-6		39 11 59	80 04 01	1985	1986
L&E Inc		Fayette	d-11336, 46-0658	0	37 57 39	80 53 56	1985	1986
Laurel Run Minin	#1 mine	Grant	MDP 665-78, MDP 6462-82		39 13 05	79 17 39		
Metco Mining	Jewell Eagle, Melville#2	Logan	P-5898-76	22 tons/day	37 50 48	81 56 30	8/13/1979	1980
Old Ben Coal	Crystal Block #8, #29	Mingo	U-226-83, WV006	185,000,000	37 35 03	82 03 57	1981	1986
Old Ben Coal Co	Crystal Block No. 8 Mine	Mingo	WV5470594279	26 wells	37 34 55	82 04 15	1973	
Old Ben Mining C	No. 20 Mine Prep Plant	Mingo	WVS470594279	206 GPM	37 35 12 37 35 06 37 35 08 37 35 10	82 03 46 82 03 43 82 03 41 82 03 40		
Olga Coal Co.	Olga Preparation Plant and	McDowell	WV0003018		37 19 20	81 44 20		
Omar Mining Cor	Chesterfield No. 1 mine	Boone	MPD 6037-78	220 million gallo	38 01 28	81 42 41	1980	Jun-84
Omar Mining Cor	Chesterfield No. 5 Mine	Boone	EM-50 D-6231 MDP 6039-78 WV0038768	10120 tons	38 01 31 38 02 08 38 01 33	81 42 49 81 42 47 81 42 43	1980	1984
Omar Mining Cor	Chesterfield Mine No. 3	Boone	WVS47005504 P-	180 TPD	38 01 54	81 43 05	1978	
Pardee and Curti	Bolair No. 1	Webster	WVS471015001,		38 26 40	80 26 17		
PCR Joint Venture		Raleigh	WV-1001744		37 41 29	81 18 48		
Peter White Coal	Old Works in Pond Creek S	Mingo	unknown	3450 cu. Yd.(.23	37 34 25	81 52 01	1980	1981
Piney Fuel Corp		Raleigh	WV1000063		37 34 34	81 17 20		
Pond Creek Minir	Pond Creek No. 1 Mine	Mingo	EM-12	555876800 gallo	37 39 56	82 12 13	1984	1986

Powellton Co	Jane Ann #3	Logan	o-35-84	9000 tons	37 42 43	81 54 41	Mar-79	Jun-79
Quinland Coals	#1 mine	Boone	U-57-83, P-6050-8	4,000,000	38 01 00	81,44,30	1985	1985
Red Ash Sales C	Red Ash Smokeless Coal C	Wyoming	46-05872		37 32 26	81 48 17		
Royalty Smokele	Premier #8	McDowell	46-02210		37 23 31	81 37 42		
Sewell Coal	Panther	Nicholas	WVS47067590	3-4 tons per day	38 15 54	80 40 59	1976	
Sewell Coal Company		Nicholas	WV0002976, P-60	2800 tons	38 16 32	80 41 42	1980	1986
Slab Fork Coal	No. 8	Raleigh	WVS470815001,		37 41 17	81 20 59		
Smith Brothers C	Mine #1	Mingo	WV5470595003	1 well	37 40 00	82 14 52		
Smith Brothers C	No. 1 Mine	Mingo	WV0000434, U-	46800000	37 40 03	82 14 50	1983	1986
South Union Coa	Edna Mine	Monongalia	MDP-6013-78		39 34 32	80 03 14		
Southern Ohio C	Martinka mine#1	Marion	EM-125, WV0062	41,711,000gal	39 24 55	80 07 19	1976	1986
Sprouse Creek P	By-Product Coal Co.	Mingo	P-5894-76	1600 tons/day	37 39 06	82 11 26	1977	
Sprouse Creek Processing Co.		Mingo	WV5470595894	n/a	37 39 06	82 11 26		
Sprouse Creek Processing Co.		Mingo	WVS470595894	600 gallons per	37 39 06	82 11 26		
Sterling Smokless Coal		Raleigh	O-94-83?		37 30 40	81 07 56	1980	
Sycamore Coal		Mingo	o-34-83		37 41 11	81 14 10		
Sycamore Coal	Mine #12	Mingo	D-T0339, D10507	8 tons/day	37 41 08	82 14 04		
T&T Fuels	Mine #3	Preston	WVS470775002		39 33 06	79 39 20		
The Powellton C	Jane Ann Tipple No. 3 Mine	Logan	WVS470455911	150 TPD 20% s	37 42 34	81 54 41	1979	1979
Thistle Coal Co.		Raleigh	WV1000632		37 43 39	81 16 20		
Toney's Branch C	#56 mine	Boone	wvd10604, MSHA	46-0-6179	38 08 54	81 37 33		
Upshur Coal Cor	Adrian	Upshur	O-4-84, D-82-91,	251,900,000	38 55 49	80 17 22	1974	1986
US Steel mining	Carbon fuel #9	Kanawha	0-91-82,0-14-82, V	4,000,000	38 00 37	81 25 29	1982	1983
US Steel mining	Mine #20	Mingo	P-4279, D-6792	226 tons/day	37 34 55	82 04 14	1973	1980
Valley Camp Coa	#1 and #3 mines	Ohio	WVS470695001		40 02 50	80 39 22		1984
Westmoreland Coal Co.		Raleigh	WV0090379		37 46 16	81 16 28		
Windsor Power H	Beech Bottom mine	Brook	WPC 4665, MDP-6405-81, WV005		40 12 41	80 38 45	1982	1986
Windsor Powerh	Beech Bottom mine	Ohio	WVS470694665		40 09 40	80 36 49	1974	Feb-79
Youngstown Min	Daney Mine	Logan	P-5999-79 D-	150 tons/day wit	37 48 58	81 54 51		

Appendix II-C

UIC PROGRAM APPROVED CHEMICALS

Underground Injection Control – Mining

Products/Chemicals/Reagents

Acceptable:

Akers Supply Primag (Magnetite)
Appalachian Chemical Services ACS-06
Appalachian Chemical Services ACS 142
Appalachian Chemical Services ACS 145
Appalachian Chemical Services ACS 310
Appalachian Chemical Services ACS 312
Appalachian Chemical Services ACS 711
Appalachian Chemical Services ACS 712
Anhydrous Ammonia*
Ashland Envirogard 196
Caustic Soda 30 - 42%*
Chemtall Anionic Emulsion Polymer
Chemtall Anionic Powder Polymer
Chemtall Flomin Floerger AN 934
Chemtall Flomin Floerger AN 934 MPM
Chemtall Flomin Floerger AN 934 SH
Chemtall Flomin Floerger AN 945
Chemtall Flomin Floerger AN 945 SH
Chemtall Flomin Floerger EM 230
Chemtall Flomin Floerger EM 533
Chemtall Flomin Floerger EM 630
Chemtall Flomin Floerger FA 920 BPM
Chemtall Flomin Floerger FA 920 MPM
Chemtall Flomin Floerger FA 920 SH
Chemtall Flomin Floerger FA 920 VLM
Chemtall Flomin Floerger FLA 102
Chemtall Flomin Floerger RHA 1015
Chemtall Flomin Floerger RHA 5015
Ciba Magnafloc 10 (Percol 10)
Ciba Magnafloc 24 (Percol E24)
Ciba Magnafloc 155 (Percol 155)
Ciba Magnafloc 156 (Percol 156)
Ciba Magnafloc 333 (Percol 333)
Ciba Magnafloc 336
Ciba Magnafloc 351
Ciba Magnafloc 356
Ciba Magnafloc 358 (Percol 358)
Ciba Magnafloc 368

Ciba Magnafloc 919 (Percol 919)
Ciba Magnafloc 1011 (Percol 727)
Ciba Magnasol ANI (Percol ANI)
Ciba Magnasol CN2 (Percol CN2)
Ciba Zetag 7117
Conoco Process Oils 3P, 4P, 6P, 12P
Cytec Accoal 9628 Promoter (Frother)
Cytec Aerofloc 550 Reagent Solution
Cytec Aerofroth 88 Frother (AF 88)
Cytec OrePrep D206 Defoamer
Cytec OrePrep F-571 Frother
Cytec Reagent S-9628 Promoter
Cytec Reagent S-9628A Promoter
Cytec Reagent S-9628B Promoter
Cytec Reagent S-9630 Promoter
Cytec Superfloc 1206 Plus Flocculant
Cytec Superfloc 1422RS Flocculant
Cytec Superfloc A-130 Flocculant
Cytec Superfloc A-1885 RS Flocculant
Cytec Superfloc N-1986 Flocculant
Cytec WP-5202
degussa Praestol A3010LTR
degussa Praestol M535
degussa X-1110
Freedom Industries ClearFloc 310 (was FF310)
Freedom Industries ClearFloc 330 (was FF330)
Freedom Industries ClearFloc 350 (was FF350)
Freedom Industries ClearFloc 7122 (was FF7122)
Freedom Industries EnviroFloc 1125
Freedom Industries EnviroFloc CF-1
Freedom Industries DWA 70
Freedom Industries FCA-1000
Freedom Industries FEC-01 Flotation Collector
Freedom Industries FEC-02 Flotation Collector
Freedom Industries FEC 03
Freedom Industries FFC-10M
Freedom Industries FFC-12M
Freedom Industries FZCF-3200
Freedom Industries HAR Z-3
Freedom Industries Procol F937

Freedom Industries ShurFlot 940 (was FF940)
Freedom Industries ShurFlot 944 (was TF 944)
Freedom Industries ShurFlot 944C-20 (was TF 944C-20)
Freedom Industries ShurFlot 944C-40 (was TF 944C-40)
Freedom Industries ShurFlot 944G-5
Freedom Industries ShurFlot 948 (was Procol F948)
Freedom Industries ShurFlot 949 (was TF 949)
Freedom Industries ShurFlot 950 (was Procol 944B)
Freedom Industries ShurFlot 968 (was TF 968)
Freedom Industries ShurFlot 980-30 (was TF 980-A)
Freedom Industries ShurFlot 990 (was TF 990)
Freedom Industries/Ciba Magnafloc 371
Freedom Industries/Ciba Zetag 7122
Hydrotex HyDiamond Process Oil All ISO Grades
Hydrated Lime*
Kiln Dust*
Kroff Chemical Company KR-AS
Kroff Chemical Company KR-F2214
Kroff Chemical Company KR-F2311
Liquid Caustic Soda*
Magnetite*
Nalclear 9810 Flocculant
Nalco Cat-Floc CFL
Nalco Cat-Floc 9851 Plus
Nalco Cat-Floc 83701
Nalco DVS4U007
Nalco DVS4U012
Nalco DVS4U018
Nalco Enact 7880
Nalco Enact 7883 Liquid
Nalco Nalcoal 8897
Nalco Nalflote 9747
Nalco Optimer 8873
Nalco Optimer 83501
Nalco Optimer 83949
Nalco Optimer 9809
Nalco Optimer 9880 PULV Flocculant
Nalco 01DU113 (9834)
Nalco 01DU114
Nalco 03DU005
Nalco 03DU035 (9835)
Nalco 7810 Antifoam
Nalco 8836 Plus
Nalco 8855 Coagulant

Nalco 8856 Coagulant
Nalco 8864 Liquid
Nalco 8873 Flocculant
Nalco 8877 Flocculant
Nalco 97Duo82
Nalco 97Duo86
Nalco 97Duo89
Nalco 99DUO09 (9842)
Nalco 9806 Optimer Flocculant
Nalco 9818 Optimer Flocculant
Nalco 9834
Nalco 9835
Nalco 9842
Nalco 9853 Coagulant
Nalco 9901 Optimer Flocculant
Neo Solutions NS2991
Neo Solutions NS3434
Neo Solutions NS3455
Neo Solutions NS6250
Neo Solutions NS6351
Neo Solutions NS6500
Neo Solutions NS6750
Neo Solutions NS6763
Neo Solutions NS6853
Neo Solutions NS9179
Neo Solutions NS18100
Neo Solutions TF25
Neo SolutionsTF3434A
Neo Solutions TF949
Novel II-190
Novel II-234
O'Brien Chemicals O'B Floc AE-614
O'Brien Chemicals (Zinkan Enterprises) O'B Floc CS-653
O'Brien Chemicals (Zinkan Enterprises) O'B Floc CS-653-R
O'Brien Chemicals (Zinkan Enterprises) O'B Floc CS-658
O'Brien Chemicals O'B Floc PAC-100
Pearl River Polymers FLOMIN PRP 4440 Coagulant
Pearl River Polymers FLOMIN PRP 4520
Pearl River Polymers FLOMIN PRP 4540
Polyacrylamide*
Reiss Viking Magnetite
SNF S.A. Flomin FLOBEADS DB 45 SH
SNF S.A. Flomin FLOBEADS DB 45 SSH
SNF, Inc. Flomin 9628
SNF, Inc. Flomin F 122

SNF, Inc. Flomin F 123
SNF, Inc. Flomin F 124
SNF, Inc. Flomin F 125
SNF, Inc. Flomin F 410
SNF, Inc. Flomin F 1102
SNF, Inc. Flomin Frother 112
SNF, Inc. Flomin Frother 113
Stockhausen, Inc. Praestol A3010LTR
Stockhausen, Inc. Praestol CM-302
Stockhausen, Inc. Praestol M-535
Stockhausen, Inc. X-1110
Soda Ash*
Sodium Hydroxide Solution*
Van Air Systems Deliquescent Dessicant
Van Air Systems Type 10BF Chemical Drying Tablets
Zinkan O'B DT 8
Zinkan O'B DT 10
Zinkan O'B DT 16
Zinkan O'B DT 50
Zinkan O'B DT 300
Zinkan O'B DT 350
Zinkan O'B Float 580
*Zinkan O'B Floc 85**
Zinkan O'B Floc AD 603
Zinkan O'B Floc AD 603XX
Zinkan O'B Floc AD 605
Zinkan O'B Floc AD 605XX
Zinkan O'B Floc AD 607
Zinkan O'B Floc AD 608
Zinkan O'B Floc CD 670
Zinkan O'B Floc CD 670R
Zinkan O'B Floc CS-653
Zinkan O'B Floc CS-653-R
Zinkan O'B Floc CS-661
Zinkan O'B Floc NS-675
Zinkan O'B Floc Pac-100
Zinkan O'B Froth 060
Zinkan O'B No Foam SC-10

NOTE: DEP reserves the right to disallow any of the above for use in UIC-related processes if site-specific circumstances so warrant.

Unacceptable:

- **Any** product containing a substance classified as a Hazardous Waste under RCRA
- **Any** product containing a substance demonstrated to be toxic to humans
- **Any** product containing a toxic petroleum hydrocarbon, especially diesel fuel, gasoline, or kerosene

Acid Alum
Freedom Industries ShurFlot 980-20 (was Procol F939)
Freedom Industries ShurFlot 980-40 (was TF-980)
Nalco En-Act 7885 Clarification Aid
Nalco En-Act 7886
Nalco Nalflote 9837
Nalco 7835
Nalco 7888 Clarification Aid
Nalco 97DUO86
Nalco 9815 Flocculant
Nalco 9822 Flocculant
Nalco 9843 Flotation Reagent
Nalco 9847 Coal Flotation Reagent
Nalco 9850 (WT2900) Cationic
Nalco 9854 Optimer Thickener
Nalco 99 Duo 18
Neo Solutions IR320
Novel II-102
Ondeo Nalco Raw Material R-3093
SNF, Inc. Flomin Frother 110
Sulfuric Acid 77 to 100%
Zinkan O'B Float 581
Zinkan O'B Froth 504
Zinkan O'B Froth 532
Zinkan O'B No Foam 24
Zinkan O'B Shur-Coal 162
Zinkan O'B Shur-Coal 168
Zinkan O'B Shur-Coal 168-A
Zinkan O'B Shur-Coal214

Not Rated:

4-methyl-2-pentanol***

*AKJ Industries AC-115Q***
*AKJ Industries PC-5040A***
*Cytec Aerofroth 70 Frother***
Cytec Superfloc 1422RS Flocculant
*Occidental Chemical Sodium Silicate Liquid Siliceous****
*SNF S.A. Flomin FLOBEADS DP/DB 45****
*SNF S.A. Flomin FLOBEADS DP/DB 45 VHM****
*Stockhausen Praestol CM-302****
*Union Carbide Tergitol NP-9 Surfactant***

* Manufacturer's formulation **MUST NOT** meet the RCRA definition of a Hazardous Waste unless, if listed as D002 (corrosivity), the product may be acceptable with special handling
** MSDS contains no RCRA Hazardous Waste statement
*** Incomplete MSDS

List created after MSDS reviews by:

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Division of Water and Waste Management
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Appendix II-D

MATERIAL SAFETY DATA SHEETS (MSDSs)

GENERAL

MATERIAL SAFETY DATA SHEET

NAME OF PRODUCT

FILE NUMBER:

MSDS DATE:

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:
SYNONYMS:
PRODUCT CODES:

MANUFACTURER:
DIVISION:
ADDRESS:

EMERGENCY PHONE:
CHEMTREC PHONE:
OTHER CALLS:
FAX PHONE:

CHEMICAL NAME:
CHEMICAL FAMILY:
CHEMICAL FORMULA:

PRODUCT USE:
PREPARED BY:

SECTION 1 NOTES:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

CAS NO. % WT % VOL SARA 313 REPORTABLE

ppm mg/m3

OSHA PEL-TWA:
OSHA PEL STEL :
OSHA PEL CEILING:

ACGIH TLV-TWA:
ACGIH TLV STEL:
ACGIH TLV CEILING:

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

ROUTES OF ENTRY:

POTENTIAL HEALTH EFFECTS

EYES:

SKIN:

INGESTION:

INHALATION:

ACUTE HEALTH HAZARDS:

CHRONIC HEALTH HAZARDS:

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

CARCINOGENICITY

OSHA: ACGIH: NTP: IARC:

OTHER:

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES:

SKIN:

INGESTION:

INHALATION:

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER:
(% BY VOLUME) LOWER:

FLASH POINT:
F:
C:
METHOD USED:

AUTOIGNITION TEMPERATURE:
F:
C:

NFPA HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: REACTIVITY:
OTHER:

HMIS HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: REACTIVITY:
PROTECTION:

EXTINGUISHING MEDIA:

SPECIAL FIRE FIGHTING PROCEDURES:

UNUSUAL FIRE AND EXPLOSION HAZARDS:

HAZARDOUS DECOMPOSITION PRODUCTS:

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:

OTHER PRECAUTIONS:

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION :

RESPIRATORY PROTECTION:

EYE PROTECTION:

SKIN PROTECTION:

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WORK HYGIENIC PRACTICES:

EXPOSURE GUIDELINES:

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

ODOR:

PHYSICAL STATE:

pH AS SUPPLIED:
pH (Other):
BOILING POINT:
F:
C:

MELTING POINT:
F:
C:

FREEZING POINT:
F:
C:

VAPOR PRESSURE (mmHg):
@
F:
C:

VAPOR DENSITY (AIR = 1):
@
F:
C:

SPECIFIC GRAVITY (H2O = 1):
@
F:
C:

EVAPORATION RATE:

BASIS (=1):

SOLUBILITY IN WATER:

PERCENT SOLIDS BY WEIGHT:

PERCENT VOLATILE:
BY WT/
BY VOL @
F:
C:

VOLATILE ORGANIC COMPOUNDS (VOC):
WITH WATER: LBS/GAL
WITHOUT WATER: LBS/GAL

MOLECULAR WEIGHT:
VISCOSITY:
@
F:
C:

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABLE UNSTABLE

STABILITY:

CONDITIONS TO AVOID (STABILITY):

INCOMPATIBILITY (MATERIAL TO AVOID):

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

HAZARDOUS POLYMERIZATION:

CONDITIONS TO AVOID (POLYMERIZATION):

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

RCRA HAZARD CLASS:

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
- PROPER SHIPPING NAME:
- HAZARD CLASS:
- ID NUMBER:
- PACKING GROUP:
- LABEL STATEMENT:

WATER TRANSPORTATION
- PROPER SHIPPING NAME:
- HAZARD CLASS:
- ID NUMBER:
- PACKING GROUP:
- LABEL STATEMENTS:

AIR TRANSPORTATION
PROPER SHIPPING NAME:
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:
LABEL STATEMENTS:

OTHER AGENCIES:

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
TSCA (TOXIC SUBSTANCE CONTROL ACT):

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

311/312 HAZARD CATEGORIES:

313 REPORTABLE INGREDIENTS:

STATE REGULATIONS:

INTERNATIONAL REGULATIONS:

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER:

Appendix II-E

MATERIAL SAFETY DATA SHEETS (MSDSs)

SOUTHERN MINERALS

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALFLOTE® 9747

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **NALFLOTE® 9747**

APPLICATION : FLOTATION REAGENT

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 1 / 2 FLAMMABILITY : 2 / 2 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Mixed C3-24 Alcohols, Aldehydes and Esters	125997-22-0	60.0 - 100.0
2-Ethylhexanol	104-76-7	10.0 - 30.0

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

WARNING
Combustible. Irritating to eyes and skin.
Keep away from heat. Keep away from sources of ignition - No smoking. Keep container tightly closed. Do not get in eyes, on skin, on clothing. Avoid breathing vapor. Use with adequate ventilation. Do not take internally. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.
Wear suitable protective clothing, gloves and eye/face protection.
Combustible Liquid; may form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin, Inhalation

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
Can cause mild to moderate irritation.

SKIN CONTACT :
Can cause mild to moderate irritation. Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

INGESTION :
Not a likely route of exposure. May be harmful if swallowed.

INHALATION :
Repeated or prolonged exposure may irritate the respiratory tract.

SYMPTOMS OF EXPOSURE :
Acute :
Inhalation of high concentrations of organic solvents can cause nausea, dizziness, vomiting, stupor or unconsciousness.
Chronic :
Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

AGGRAVATION OF EXISTING CONDITIONS :
Skin contact may aggravate an existing dermatitis condition.

4. FIRST AID MEASURES

EYE CONTACT :
Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get medical attention.

SKIN CONTACT :
Immediately wash with plenty of soap and water. If symptoms develop, seek medical advice.

INGESTION :
Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :
Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : > 144 °F / > 62 °C (PMCC)

EXTINGUISHING MEDIA :
Alcohol foam, Carbon dioxide, Foam, Dry powder, Other extinguishing agent suitable for Class B fires, For large fires, use water spray or fog, thoroughly drenching the burning material.

Water mist may be used to cool closed containers.

FIRE AND EXPLOSION HAZARD :
Combustible Liquid; may form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Remove sources of ignition. Stop or reduce any leaks if it is safe to do so. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

7. HANDLING AND STORAGE

HANDLING :
Do not get in eyes, on skin, on clothing. Do not take internally. Do not breathe vapors/gases/dust. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Keep the containers closed when not in use. Use with adequate ventilation. Do not use in locations where vapor is likely to travel to welding flames or arcs or to other hot surfaces. Vapors are much heavier than air, this can result in uneven distribution.

STORAGE CONDITIONS :
Store the containers tightly closed. Store in suitable labelled containers. Store away from heat and sources of ignition. Store separately from oxidizers. Have appropriate fire extinguishers available in and near the storage area. Use proper grounding procedures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
At present, no exposure limit applies to this product. However, good manufacturing practices should emphasize exposure avoidance.

ENGINEERING MEASURES :
Use general ventilation with local exhaust ventilation.

RESPIRATORY PROTECTION :
If significant mists, vapors or aerosols are generated an approved respirator is recommended. An organic vapor cartridge with dust/mist prefilter or supplied air may be used. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :
Nitrile gloves, Viton# gloves, Polyvinyl alcohol gloves

SKIN PROTECTION :
Wear impervious apron and boots.

EYE PROTECTION :
Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :
Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Dark brown
ODOR	Alcoholic

SPECIFIC GRAVITY	0.87 - 0.94 @ 77 °F / 25 °C
DENSITY	7.2 - 7.8 lb/gal
SOLUBILITY IN WATER	Partial
VISCOSITY	8 cps @ 74 °F / 23 °C
BOILING POINT	257 - 302 °F / 125 - 150 °C
VAPOR PRESSURE	> 2 mm Hg @ 68 °F / 20 °C

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Heat and sources of ignition including static discharges.

MATERIALS TO AVOID :
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

ACUTE ORAL TOXICITY :

Species	LD50	Test Descriptor
Rat	> 5,000 mg/kg	Product

Rating : Non-Hazardous

ACUTE DERMAL TOXICITY :

Species	LD50	Test Descriptor
Rabbit	> 20,000 mg/kg	Product

Rating : Non-Hazardous

SENSITIZATION :
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

MUTAGENICITY :
Negative in the Ames Test.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

No toxicity studies have been conducted on this product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Fathead Minnow	96 hrs	32 mg/l	Product

Rating : Slightly toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	1.2 - 2.3 mg/l		Product

Rating : Toxic

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

For Packages Less Than Or Equal To 119 Gallons:

Proper Shipping Name :	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

For Packages Greater Than 119 Gallons:

Proper Shipping Name :	COMBUSTIBLE LIQUID, N.O.S.
Technical Name(s) :	2-ETHYLHEXANOL, 2-ETHYLHEXANAL
UN/ID No :	NA 1993
Hazard Class - Primary :	COMBUSTIBLE
Packing Group :	III
Flash Point :	> 62 °C / > 144 °F

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Mixed C3-24 Alcohols, Aldehydes and Esters : Irritant, Combustible.
2-Ethylhexanol : Eye irritant

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X	Immediate (Acute) Health Hazard
-	Delayed (Chronic) Health Hazard
X	Fire Hazard
-	Sudden Release of Pressure Hazard
-	Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
This product contains the following substances listed in the regulation:

Substance(s)	Citations
• 2-Ethylhexanol	Sec. 111

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
The following substances are disclosed for compliance with State Right to Know Laws:

Mixed C3-24 Alcohols, Aldehydes and Esters	125997-22-0
2-Ethylhexanol	104-76-7

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :
B3 - Combustible Liquids, D2B - Materials Causing Other Toxic Effects - Toxic Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
This product contains substance(s) which are found on the Non-Domestic Substances List (NDSL).

16. OTHER INFORMATION

FECC071394

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 06/10/2004
Version Number : 1.7

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CALL ME NOW

Enter a Chemical Name, CAS Number, Molecular Formula or Weight.
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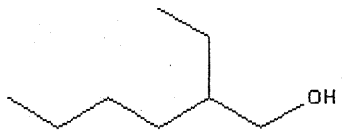
Search

2-Ethyl-1-hexanol [104-76-7]

Synonyms: 2-Ethyl-1-hexanol; 2-Ethylhexan-1-ol; 2-Ethylhexanol;



Tools

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ADD LINK

CAS RN Lookup

THE MERCK INDEX
NCI DATABASE

Formula	$C_8H_{18}O$	Molecular Weight	130.2296
CAS RN	104-76-7	Melting Point (°C)	-76
ACX Number	X1001562-0	Boiling Point (°C)	183
Density	0.833	Vapor Density	4.5
Refractive Index	1.4316	Vapor Pressure	0.36
Evaporation Rate	0.01	Water Solubility	<0.1 g/100 mL at 18 C
Flash Point (°C)	77	EPA Code	
DOT Number		RTECS	MP0350000
Comments	Clear colorless liquid		

More information about the chemical is available in these categories:

Biochemistry Health Pesticides/Herbicides Physical Properties
Regulations Trading

Biochemistry (2)

Flavornet

Information about this particular compound

Ligand Chemical Database for Enzyme Reactions

Information about this particular compound

Health (7)
8(e) TRIAGE Chemical Studies Database
Air Pollution Exposure Distributions of Adult Urban Populations in Europe
ATSDR Internet HazDat Site Contaminant Query
Information about this particular compound
CHEMICALS STUDIED through NIEHS's Reproductive Toxicology Group
International Chemical Safety Cards
Information about this particular compound
Polar Organic Compounds in Fragrances of Consumer Products
UMCP Partial list of teratogens

Pesticides/Herbicides (1)
USEPA / OPP's Chemical Ingredients Database
Information about this particular compound

Physical Properties (7)
ABCR GmbH&Co KG
2-Ethyl-1-hexanol, 99%
Critical Properties of Various Gases
Fragranced Products Information Network
Information about this particular compound
Inspec Specialties
NFPA Chemical Hazard Labels
Information about this particular compound
NIST Chemistry WebBook
Information about this particular compound
Organic Compounds Database

Regulations (5)
Guide to NIOSH/OSHA Air Sampling Methods
Information about this particular compound
Information about this particular compound
OSHA Chemical Sampling and Methods

Information about this particular compound

Procedures for handling carcinogens at Rochester

Texas Clean Air Act

Trading (1)

Available Chemicals Exchange

Information about this particular compound

Enter a Chemical Name, CAS Number, Molecular Formula or Weight.
Use * for partial names (e.g. ben*).
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CambridgeSoft Corporation, 100 CambridgePark Drive, Cambridge, MA 02140 USA
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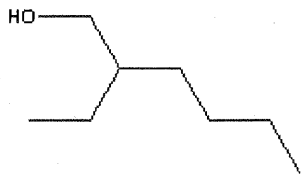
Synonyms:

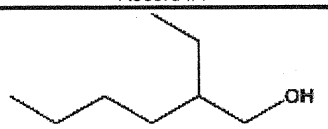
1-Ethyl-n-amylcarbinol
2-Ethyl 1-hexanol
2-Ethyl hexanol
2-Ethyl Hexyl Alcohol
2-Ethyl-1-hexanol
2-Ethyl-hexan-1-ol
2-Ethylhexan-1-ol
2-Ethylhexanol
2-Ethylhexyl alcohol
Alcohol C(8)
Alcohol C8
Isocotyl alcohol

Click here for information about these search results.

	Structure	Formula	NSC	CASRN	Synoymns
Record 1 of 1 Mark Record General Info		$C_8H_{18}O$	9300	104-76-7	• 1-Hexanol, 2-ethyl- (8CI9CI) • 2-Ethyl-1-hexanol • 2-Ethylhexan-1-ol

NAMES ▼ | TABLE VIEW | MARK

Record #1



CAS#: 104-76-7

Formula:	$C_8H_{18}O$
MW:	130.22792
ACX Number:	X1001562-0

ALL VENDORS | YOUR FAVORITES | ONLINE VENDORS

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Aldrich

CATALOG VIEW | COMPACT VIEW

2-ETHYL-1-HEXANOL

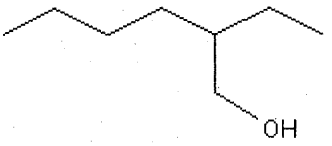
FOUND 25 SUPPLIERS SELLING 32 PRODUCTS

TO COMPARE PRICES AND CATALOG DATA PLEASE CHOOSE ONE OR MORE SUPPLIERS FROM THE SELECTION LIST TO THE LEFT

You can select multiple suppliers by using Ctrl-Click (PC) or Cmnd-Click (Mac)

1-Hexanol, 2-ethyl-

- **Formula:** $C_8H_{18}O$
- **Molecular weight:** 130.23
- **IUPAC International Chemical Identifer:**
  - InChI=1/C8H18O/c1-3-5-6-8(4-2)7-9/h8-9H,3-7H2,1-2H3
  - Download the identifier in a file.
- **CAS Registry Number:** 104-76-7
- **Chemical structure:**



This structure is also available as a 2d Mol file or as a computed 3d Mol file.

- **Other names:** Ethylhexanol; 2-Ethyl-1-hexanol; 2-Ethylhexan-1-ol; 2-Ethylhexanol; 2-Ethylhexyl alcohol; 2-Ethyl-hexanol-1; Ethylhexyl alcohol; 2-EH; Aerofroth 88; Octyl alcohol; Surfynol 104A; Hexan-1-ol, 2-ethyl; Hexanol, 2-ethyl
- **Information on this page:**
  - Notes / Error Report
- **Other data available:**
  - Condensed phase thermochemistry data
  - Phase change data
  - IR Spectrum
  - Mass Spectrum
  - Gas Chromatography
- **Options:**
  - Switch to calorie-based units

Notes / Error Report

Go To: Top

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Name Not Found

The requested name (C3-24 alcohols) was not found in the database. It is possible that the requested species is in the database under a different name. Please consider using a chemical formula or a CAS registry number search to try to find the species.

Return to name search page.

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Name Not Found

The requested name (aldehydes) was not found in the database. It is possible that the requested species is in the database under a different name. Please consider using a chemical formula or a CAS registry number search to try to find the species.

Return to name search page.

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Name Not Found

The requested name (nalco 01DU113) was not found in the database. It is possible that the requested species is in the database under a different name. Please consider using a chemical formula or a CAS registry number search to try to find the species.

Return to name search page.

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NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

OPTIMER® 8873

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **OPTIMER® 8873**

APPLICATION : FLOCCULANT

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 0 / 1 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause irritation with prolonged contact. Toxic to aquatic organisms.
Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water. Protect product from freezing.
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. Water in contact with the product will cause slippery floor conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. If swallowed a jelly mass may form which in digestion may cause blockage.

INHALATION :
Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :
Acute :
A review of available data does not identify any symptoms from exposure not previously mentioned.
Chronic :
Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

AGGRAVATION OF EXISTING CONDITIONS :
A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :
Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT :
Remove contaminated clothing. Wash off affected area immediately with soap and plenty of water. If symptoms develop, seek medical advice.

INGESTION :
Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :
Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT :	> 212 °F / > 100 °C (PMCC)
LOWER EXPLOSION LIMIT :	Not flammable
UPPER EXPLOSION LIMIT :	Not flammable

EXTINGUISHING MEDIA :
Foam, Dry powder, Carbon dioxide, Other extinguishing agent suitable for Class B fires

UNSUITABLE EXTINGUISHING MEDIA :
Do not use water unless flooding amounts are available.

FIRE AND EXPLOSION HAZARD :
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. Water in contact with the product will cause slippery floor conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Notify appropriate government, occupational health and safety and environmental authorities. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :
This product is toxic to fish and other water organisms. Do not discharge directly into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING :
Do not take internally. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Do not get in eyes, on skin, on clothing. Use with adequate ventilation. Keep the containers closed when not in use.

STORAGE CONDITIONS :
Store separately from oxidizers. Store the containers tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :
General ventilation is recommended.

RESPIRATORY PROTECTION :
Due to its low volatility and toxicity, the hazard potential associated with this material is relatively low. Respiratory protection is not normally needed.

HAND PROTECTION :
Nitrile gloves, PVC gloves

SKIN PROTECTION :
Wear standard protective clothing.

EYE PROTECTION :
Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :
Keep an eye wash fountain available. Keep a safety shower available.

HUMAN EXPOSURE CHARACTERIZATION :
Based on our recommended product application and personal protective equipment, the potential human exposure is: Low

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Opaque Off-white
ODOR	Hydrocarbon

SPECIFIC GRAVITY	1.03 - 1.07 @ 77 °F / 25 °C
DENSITY	8.6 - 9.0 lb/gal
SOLUBILITY IN WATER	Emulsifiable
pH (100 %)	8
VISCOSITY	400 - 1,200 cps @ 77 °F / 25 °C
FREEZING POINT	-4 °F / -20 °C
VOC CONTENT	27.4 % EPA Method 24

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Freezing temperatures.

MATERIALS TO AVOID :
Addition of water results in gelling. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon, Oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :
Based on our hazard characterization, the potential human hazard is: Low

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for a 1% aqueous solution of a similar product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Sheepshead Minnow	96 hrs	> 1,000 mg/l	1% Aqueous Solution of a Similar Product
Rainbow Trout	96 hrs	> 1,000 mg/l	1% Aqueous Solution of a Similar Product

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	280 mg/l		1% Aqueous Solution of Product
Mysid Shrimp (Mysidopsis bahia)	96 hrs	400 mg/l		1% Aqueous Solution of Product

MOBILITY :
The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM , provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	10 - 30%	70 - 90%

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: High
Based on our recommended product application and the product's characteristics, the potential environmental exposure is: Moderate

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :
Not considered a WHMIS controlled product.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: Low

* The environmental risk is: Moderate

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 05/19/2006
Version Number : 1.11

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® DVS4U018

OK

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **NALCO® DVS4U018**

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 1 / 1 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause irritation with prolonged contact.
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.
Wear suitable protective clothing.
Low Fire Hazard; liquids may burn upon heating to temperatures at or above the flash point. May evolve oxides of carbon (COx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. There may be irritation to the gastro-intestinal tract.

INHALATION :
Not a likely route of exposure. No adverse effects expected. Vapors are irritating to eyes, nose, throat and lungs. Hot vapors may cause nausea and dizziness.

AGGRAVATION OF EXISTING CONDITIONS :
Skin contact may aggravate an existing dermatitis condition.

HUMAN HEALTH HAZARDS - CHRONIC :
No adverse effects expected other than those mentioned above.

4. FIRST AID MEASURES

EYE CONTACT :
Immediately flush eye with water for at least 15 minutes while holding eyelids open. If symptoms persist, call a physician.

SKIN CONTACT :
Immediately wash with plenty of soap and water. If symptoms develop, seek medical advice.

INGESTION :
Get medical attention. If conscious, washout mouth and give water to drink.

INHALATION :
Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : > 200 F/ > 93.3 C

EXTINGUISHING MEDIA :
Foam, Carbon dioxide, Dry powder, Other extinguishing agent suitable for Class B fires, For large fires, use water spray or fog, thoroughly drenching the burning material.
Water mist may be used to cool closed containers.

UNSUITABLE EXTINGUISHING MEDIA :
Do not use water unless flooding amounts are available.

FIRE AND EXPLOSION HAZARD :
Low Fire Hazard; liquids may burn upon heating to temperatures at or above the flash point. May evolve oxides of carbon (COx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible.

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :
Prevent material from entering sewers or waterways.

7. HANDLING AND STORAGE

HANDLING :
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled.

STORAGE CONDITIONS :
Store in suitable labeled containers. Store the containers tightly closed. Store separately from oxidizers.

SUITABLE CONSTRUCTION MATERIAL :
Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :
The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.

RESPIRATORY PROTECTION :
Where concentrations in air may exceed the limits given in this section, the use of a half face filter mask or air supplied breathing apparatus is recommended. A suitable filter material depends on the amount and type of chemicals being handled. Consider the use of filter type: Organic vapor cartridge. with a Particulate pre-filter. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :
When handling this product, the use of chemical gloves is recommended., The choice of work glove depends on work conditions and what chemicals are handled, but we have positive experience under light handling conditions using gloves made from, PVC, ., Gloves should be replaced immediately if signs of degradation are observed., Breakthrough time not determined as preparation, consult PPE manufacturers.

SKIN PROTECTION :
Wear standard protective clothing. See general advice.

EYE PROTECTION :
When handling this product, the use of safety glasses with side shields is recommended.

HYGIENE RECOMMENDATIONS :
Use good work and personal hygiene practices to avoid exposure. Consider the provision in the work area of a safety shower and eyewash. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Light yellow
ODOR	Mild

SPECIFIC GRAVITY	0.87 @ 60.0 °F / 15.5 °C
DENSITY	7.2 lb/gal
SOLUBILITY IN WATER	Partial
VOC CONTENT	1.0 % Calculated

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Avoid extremes of temperature.

MATERIALS TO AVOID :
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

No toxicity studies have been conducted on this product.

MOBILITY :
The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM , provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	< 5%	<5%

The portion in water is expected to float on the surface.

BIOACCUMULATION POTENTIAL
This preparation or material is not expected to bioaccumulate.

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :
Not considered a WHMIS controlled product.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 01/24/2007
Version Number : 1.0

ONDEO Nalco

MATERIAL SAFETY DATA SHEET

PRODUCT

Nalco 01DU113

dk

EMERGENCY TELEPHONE NUMBER
(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **Nalco 01DU113**

COMPANY IDENTIFICATION : ONDEO Nalco Company
ONDEO Nalco Center
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 0 / 1 FLAMMABILITY 1 / 1 REACTIVITY : 0 / 0 OTHER :
:

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause irritation with prolonged contact.
Do not get in eyes, on skin, on clothing. Use with adequate ventilation. Do not take internally. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.
Wear suitable protective clothing, gloves and eye/face protection.
Low Fire Hazard; liquids may burn upon heating to temperatures at or above the flash point. May evolve oxides of carbon (COx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. No adverse effects expected.

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MATERIAL SAFETY DATA SHEET

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Nalco 01DU113

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INHALATION :
Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :
Acute :
A review of available data does not identify any symptoms from exposure not previously mentioned.
Chronic :
A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :
A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :
Flush affected area with water. If symptoms develop, seek medical advice.

SKIN CONTACT :
Immediately wash with plenty of soap and water. If symptoms develop, seek medical advice.

INGESTION :
Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :
Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : 323 °F / 162 °C (PMCC)

EXTINGUISHING MEDIA :
Carbon dioxide, Foam, Dry powder, Other extinguishing agent suitable for Class B fires, For large fires, use water spray or fog, thoroughly drenching the burning material.
Water mist may be used to cool closed containers.

UNSUITABLE EXTINGUISHING MEDIA :
Do not use water unless flooding amounts are available.

FIRE AND EXPLOSION HAZARD :
Low Fire Hazard; liquids may burn upon heating to temperatures at or above the flash point. May evolve oxides of carbon (COx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

ONDEO Nalco

MATERIAL SAFETY DATA SHEET

PRODUCT

Nalco 01DU113

EMERGENCY TELEPHONE NUMBER

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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Do not touch spilled material. Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Remove sources of ignition.

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :
Do not contaminate surface water.

7. HANDLING AND STORAGE

HANDLING :
Do not get in eyes, on skin, on clothing. Do not breathe vapors/gases/dust. Use with adequate ventilation. Keep the containers closed when not in use. Do not take internally. Ensure all containers are labelled. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

STORAGE CONDITIONS :
Store away from heat and sources of ignition. Store separately from oxidizers. Store the containers tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :
General ventilation is recommended.

RESPIRATORY PROTECTION :
Respiratory protection is not normally needed.

HAND PROTECTION :
Nitrile gloves, PVC gloves, Viton# gloves

SKIN PROTECTION :
Wear standard protective clothing.

EYE PROTECTION :
Wear chemical splash goggles.

ONDEO Nalco

MATERIAL SAFETY DATA SHEET

PRODUCT

Nalco 01DU113

EMERGENCY TELEPHONE NUMBER
(800) 424-9300 (24 Hours) CHEMTREC

HYGIENE RECOMMENDATIONS :
Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Clear Amber
ODOR	Slightly oily
SPECIFIC GRAVITY	0.88 @ 77 °F / 25 °C
DENSITY	7.65 lb/gal
SOLUBILITY IN WATER	Insoluble

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
None known.

MATERIALS TO AVOID :
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :
Based on our hazard characterization, the potential human hazard is: Low

ONDEO Nalco

MATERIAL SAFETY DATA SHEET

PRODUCT

Nalco 01DU113

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

No toxicity studies have been conducted on this product.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: Low

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are:

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

ONDEO Nalco

MATERIAL SAFETY DATA SHEET

PRODUCT

Nalco 01DU113

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The chemical substances in this product are on the TSCA 8(b) Inventory (40 CFR 710).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :
Not considered a WHMIS controlled product.

ONDEO Nalco

MATERIAL SAFETY DATA SHEET

PRODUCT

Nalco 01DU113

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, Co.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO

Prepared By : Product Safety Department
Date issued : 09/05/2001

ONDEO Nalco

MATERIAL SAFETY DATA SHEET

PRODUCT

Nalco 01DU114

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **Nalco 01DU114**

COMPANY IDENTIFICATION : ONDEO Nalco Company
ONDEO Nalco Center
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 0 / 1 FLAMMABILITY 1 / 1 REACTIVITY : 0 / 0 OTHER :
:

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause irritation with prolonged contact.
Do not get in eyes, on skin, on clothing. Use with adequate ventilation. Do not take internally. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.
Wear suitable protective clothing, gloves and eye/face protection.
Low Fire Hazard; liquids may burn upon heating to temperatures at or above the flash point. May evolve oxides of carbon (COx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. No adverse effects expected.

Appendix II-F

MATERIAL SAFETY DATA SHEETS (MSDSs)

LOADOUT, LLC

NALCO

PRODUCT

CAT-FLOC® CFL

OK

EMERGENCY TELEPHONE NUMBER

(800)462-5378 (24 Hours) (800) I-M-ALERT

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : CAT-FLOC® CFL

APPLICATION : WATER TREATMENT

CHEMICAL DESCRIPTION : Polymer, Water

COMPANY IDENTIFICATION :

Nalco Chemical Company
One Nalco Center
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER : (800)462-5378 (24 Hours) (800) I-M-ALERT

NFPA 704M/HMIS RATING
HEALTH : 0 / 1 FLAMMABILITY : 1 / 1 REACTIVITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause irritation with prolonged contact. Toxic to aquatic organisms.
Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia (NH4) under fire conditions. May evolve HCl under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. No adverse effects expected.

INHALATION :
Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :
Acute :
A review of available data does not identify any symptoms from exposure not previously mentioned.
Chronic :
A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :
A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :
Flush affected area with water. If symptoms develop, seek medical advice.

SKIN CONTACT :
Remove contaminated clothing. Wash off affected area immediately with plenty of water. If symptoms develop, seek medical advice.

INGESTION :
Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :
Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : > 200 °F / > 93 °C (PMCC)

EXTINGUISHING MEDIA :
This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire. Water mist may be used to cool closed containers.

FIRE AND EXPLOSION HAZARD :
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia (NH4) under fire conditions. May evolve HCl under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Notify appropriate government, occupational health and safety and environmental authorities. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by dyking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :
This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING :
Do not take internally. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Avoid eye and skin contact.

STORAGE CONDITIONS :
Store separately from oxidizers. Store the containers tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :
General ventilation is recommended.

RESPIRATORY PROTECTION :
Respiratory protection is not normally needed.

HAND PROTECTION :
Nitrile gloves, PVC gloves

SKIN PROTECTION :
Wear standard protective clothing.

EYE PROTECTION :
Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :
Keep an eye wash fountain available. Keep a safety shower available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Viscous liquid
APPEARANCE	Clear Yellow
ODOR	None

SPECIFIC GRAVITY	1.018 - 1.058 @ 77 °F / 25 °C
DENSITY	8.4 - 8.8 lb/gal
SOLUBILITY IN WATER	Complete
pH ()	6.5
VISCOSITY	1,500 - 3,200 cps @ 77 °F / 25 °C
BOILING POINT	> 212 °F / > 100 °C
VAPOR DENSITY	Same as water

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Freezing temperatures

MATERIALS TO AVOID :
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon, Oxides of nitrogen, HCl, ammonia

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Tested Substance
Rainbow Trout	96 hrs	0.76 mg/l	Product

Rating : Very toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Tested Substance
Daphnia magna	48 hrs	1.8 mg/l		Product

Rating : Toxic

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

Proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are:

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

NALCO

PRODUCT

CAT-FLOC® CFL

EMERGENCY TELEPHONE NUMBER

(800)462-5378 (24 Hours) (800) I-M-ALERT

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The chemical substances in this product are on the TSCA 8(b) Inventory (40 CFR 710).

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :
When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :
Not considered a WHMIS controlled product.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
All substances in this product are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, Co.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda MD.

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CAT-FLOC® CFL

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Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight™ (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO

Prepared By : Product Safety Department
Date issued : 01/14/2000
Replaces :

Appendix II-G

MATERIAL SAFETY DATA SHEETS (MSDSs)

PANTHER, LLC

SHEET ADDED
PAGE # 27 1
CORRECTION # 1
CORRECTION DATE 11/29/00
NEW RIVER ENGINEERING, INC
BY R.M.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NALCO 8855 COAGULANT
DESCRIPTION: An aqueous solution of a polyquaternary amine

NFPA 704M/HMIS RATING: 0/0 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

Our hazard evaluation of the ingredient(s) under OSHA's Hazard Communication Rule, 29 CFR 1910.1200 has found none of the ingredient(s) hazardous.

SECTION 03 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: May cause irritation with prolonged contact.
SKIN CONTACT: May cause irritation with prolonged contact.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 04 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Flush with water for 15 minutes.
INGESTION: Do not induce vomiting. Give water. Call a physician.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: None (PMCC) ASTM D-93

EXTINGUISHING MEDIA: This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use water to cool containers exposed to fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve NOx under fire conditions.

SECTION 06 ACCIDENTAL RELEASE MEASURES

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1198
AREA (630) 305-1000

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 15.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 15.

This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

SECTION 07 HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes, and clothing.

Storage : Keep container closed when not in use.

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection is not normally needed.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment, doing maintenance or handling product. Examples of impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed).

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: LOW.

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Clear to slightly hazy amber FORM: Liquid ODOR: None

DENSITY:	9.0-9.2 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.08-1.10 @ 77 Degrees F	ASTM D-1298
pH (NEAT) =	7.7	ASTM E-70
VISCOSITY:	1075 cps @ 44 Degrees F/ 700 cps @ 69 Degrees F/ 730 cps @ 72 Degrees F/ 425 cps @ 110 Degrees F	ASTM D-2983
FLASH POINT:	None (PMCC)	ASTM D-93

NOTE: These physical properties are typical values for this product.

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SECTION 10 STABLILITY AND REACTIVITY

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO2, NOx may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but toxicity studies have been conducted on a similar product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD50 = 4,699 mg/kg

95% Confidence Limit = 3,772 - 5,854 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): LD50 = Greater than 2,000 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):
SKIN IRRITATION INDEX DRAIZE RATING:
0.84/8.0 Mildly Irritating

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):
EYE IRRITATION INDEX DRAIZE RATING:
1.0/110.0 Practically Non-Irritating

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization, the potential human hazard is: LOW

SECTION 12 ECOLOGICAL INFORMATION

AQUATIC DATA:

Results below based on the product.

The 7-day chronic ceriodaphnia dubia IC50 for reproduction is 1.09 mg/L.

The corresponding 7-day NOEL was 1.25 mg/L and 0.31 mg/L for survival and reproduction, respectively.

Results below based on a similar product.

96 hour static acute LC50 to Bluegill Sunfish = 0.90 ppm

96 hour no observed effect concentration is 0.56 ppm based on no mortality or abnormal effects.

96 hour static acute LC50 to Rainbow Trout = 0.47 ppm

96 hour no observed effect concentration is 0.18 ppm based on no mortality or abnormal effects.

96 hour static acute LC50 to Sheepshead Minnow = Greater than 1000 ppm

96 hour no observed effect concentration is 100 ppm based on no

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mortality or abnormal effects.

If released into the environment, see CERCLA in Section 15.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: HIGH. Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: MODERATE.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be incinerated in accordance with local, state and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, this product is not hazardous.

CERCLA, 40 CFR 117, 302:
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

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PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:
This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
This product does not contain ingredients listed by State Right To Know Laws.

INTERNATIONAL REGULATIONS:

This is not a WHMIS controlled product under The House of Commons of Canada Bill C-70.

SECTION 16 OTHER INFORMATION

None

SECTION 17 RISK CHARACTERIZATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: LOW.
* The environmental risk is: MODERATE.

Any use inconsistent with Nalco's recommendations may affect our risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with

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MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 18 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (CD-ROM version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (CD-ROM version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), Micromedex, Inc., Englewood, CO.

Shepard's Catalog of Teratogenic Agents (CD-ROM version), Micromedex, Inc., Englewood, CO.

Suspect Chemicals Sourcebook (a guide to industrial chemicals covered under major regulatory and advisory programs), Roytech Publications (a Division of Ariel Corporation), Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, Washington (CD-ROM version), Micromedex, Inc., Englewood, CO.

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety
DATE CHANGED: 01/02/1996 DATE PRINTED: 03/28/1999

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SHEET ADDED
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CORRECTION
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NEW RIVER ENGINEERING, INC
BY P.A.

MATERIAL SAFETY DATA SHEET

NALCO

PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NALCO 8855 COAGULANT
DESCRIPTION: An aqueous solution of a polyquaternary amine

NFPA 704M/HMIS RATING: 0/0 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

Our hazard evaluation of the ingredient(s) under OSHA's Hazard Communication Rule, 29 CFR 1910.1200 has found none of the ingredient(s) hazardous.

SECTION 03 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: May cause irritation with prolonged contact.
SKIN CONTACT: May cause irritation with prolonged contact.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 04 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Flush with water for 15 minutes.
INGESTION: Do not induce vomiting. Give water. Call a physician.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

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SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: None (PMCC) ASTM D-93

EXTINGUISHING MEDIA: This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use water to cool containers exposed to fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve NOx under fire conditions.

SECTION 06 ACCIDENTAL RELEASE MEASURES

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 15.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 15.

This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

SECTION 07 HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes, and clothing.

Storage : Keep container closed when not in use.

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection is not normally needed.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment, doing maintenance or handling product. Examples of

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AREA 630-305-1000

MATERIAL SAFETY DATA SHEET

NALCO

PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION (CONTINUED)

impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed).

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: LOW.

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Clear to slightly hazy amber	FORM: Liquid	ODOR: None
DENSITY:	9.0-9.2 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.08-1.10 @ 77 Degrees F	ASTM D-1298
pH (NEAT) =	7.7	ASTM E-70
VISCOSITY:	1075 cps @ 44 Degrees F/ 700 cps @ 69 Degrees F/ 730 cps @ 72 Degrees F/ 425 cps @ 110 Degrees F	
FLASH POINT:	None (PMCC)	ASTM D-2983 ASTM D-93

NOTE: These physical properties are typical values for this product.

SECTION 10 STABLILITY AND REACTIVITY

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO_2, NOx may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but toxicity studies have been conducted on a similar product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD_{50} = 4,699 mg/kg

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MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 8855 COAGULANT

NEW RIVER ENGINEERING, INC

Emergency Telephone Number

Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 11 TOXICOLOGICAL INFORMATION (CONTINUED)

95% Confidence Limit = 3,772 - 5,854 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): LD_{50} = Greater than 2,000 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):
SKIN IRRITATION INDEX DRAIZE RATING:
0.84/8.0 Mildly Irritating

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):
EYE IRRITATION INDEX DRAIZE RATING:
1.0/110.0 Practically Non-Irritating

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization, the potential human hazard is: LOW

SECTION 12 ECOLOGICAL INFORMATION

AQUATIC DATA:

Results below based on the product.

The 7-day chronic ceriodaphnia dubia IC_{50} for reproduction is 1.09 mg/L.

The corresponding 7-day NOEL was 1.25 mg/L and 0.31 mg/L for survival and reproduction, respectively.

Results below based on a similar product.

96 hour static acute LC_{50} to Bluegill Sunfish = 0.90 ppm

96 hour no observed effect concentration is 0.56 ppm based on no mortality or abnormal effects.

96 hour static acute LC_{50} to Rainbow Trout = 0.47 ppm

96 hour no observed effect concentration is 0.18 ppm based on no mortality or abnormal effects.

96 hour static acute LC_{50} to Sheepshead Minnow = Greater than 1000 ppm

96 hour no observed effect concentration is 100 ppm based on no mortality or abnormal effects.

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AREA 630-305-1000

SHEET ADDED
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NEW RIVER ENGINEERING, INC
BY P.A.M.

PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number

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SECTION 12 ECOLOGICAL INFORMATION (CONTINUED)

If released into the environment, see CERCLA in Section 15.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: HIGH. Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: MODERATE.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be incinerated in accordance with local, state and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, this product is not hazardous.

CERCLA, 40 CFR 117, 302:
Notification of spills of this product is not required.

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1198
AREA 630-305-1000

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 8855 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 15 REGULATORY INFORMATION (CONTINUED)

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:
This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

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SECTION 15 REGULATORY INFORMATION (CONTINUED)

STATE RIGHT TO KNOW LAWS:
This product does not contain ingredients listed by State Right To Know Laws.

INTERNATIONAL REGULATIONS:

This is not a WHMIS controlled product under The House of Commons of Canada Bill C-70.

SECTION 16 OTHER INFORMATION

None

SECTION 17 RISK CHARACTERIZATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: LOW.

* The environmental risk is: MODERATE.

Any use inconsistent with Nalco's recommendations may affect our risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 18 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

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SECTION 18 REFERENCES

(CONTINUED)

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (CD-ROM version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (CD-ROM version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), Micromedex, Inc., Englewood, CO.

Shepard's Catalog of Teratogenic Agents (CD-ROM version), Micromedex, Inc., Englewood, CO.

Suspect Chemicals Sourcebook (a guide to industrial chemicals covered under major regulatory and advisory programs), Roytech Publications (a Division of Ariel Corporation), Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, Washington (CD-ROM version), Micromedex, Inc., Englewood, CO.

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety
DATE CHANGED: 01/02/1996 DATE PRINTED: 11/08/1997

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NEW RIVER ENGINEERING, INC
BY P.A.M.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 9843 FLOTATION REAGENT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) 1-M-ALERT

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NALCO 9843 FLOTATION REAGENT
DESCRIPTION: A blend of C2-C12 alcohols, aldehydes and esters

NFPA 704M/HMIS RATING 1/1 HEALTH 2/2 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous. One or more is being claimed as a trade secret under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 15 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
C2-C12 alcohols, aldehydes and esters	Proprietary	70-100
n-Butanol	71-36-3	10-20
2-Ethylhexanol	104-76-7	0-5
2-Ethylhexanal	123-05-7	5-10
2-Ethylhexenal	26266-68-2	1-10

SECTION 03 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
CAUTION: Combustible. May cause irritation to skin and eyes. Prolonged inhalation of vapor may be harmful. Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated breathing of vapor. Use with adequate ventilation. Do not take internally. Keep away from heat and open flame. Keep container closed when not in use.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: May cause irritation with prolonged contact.
SKIN CONTACT: May cause irritation with prolonged contact.

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INHALATION: Prolonged inhalation of mist or vapor may cause nausea, dizziness, light-headedness, vomiting or unconsciousness depending on the length of exposure and the first aid action given.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 04 FIRST AID INFORMATION

EYES: Immediately flush with water for at least 15 minutes while holding eyelids open. If irritation develops, call a physician

SKIN: Wash thoroughly with soap and rinse with water. If irritation develops, call a physician at once.

INGESTION: Do not induce vomiting. Give water. Call a physician.

INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: 110-120 Degrees F (TCC) ASTM D-56

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical, foam, carbon dioxide or other extinguishing agent suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly drenching the burning material.

UNUSUAL FIRE AND EXPLOSION HAZARD: None known

SECTION 06 ACCIDENTAL RELEASE MEASURES

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MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 9843 FLOTATION REAGENT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 15.

Large liquid spills: Dike to prevent further movement and reclaim into recovery
or salvage drums or tank truck for disposal. Refer to CERCLA in Section 15.

For large indoor spills, evacuate employees and ventilate area. Those responsible for control and recovery should wear the protective equipment specified in Section 8.

Keep the spill away from heat, sparks, flames and welding operations.

SECTION 07 HANDLING AND STORAGE

Storage : Keep container closed when not in use.

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection is not normally needed since the
volatility and toxicity are low. If significant vapors, mists or aerosols are generated, wear a NIOSH approved or equivalent organic vapor cartridge respirator.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where vapors, mists or aerosols may be released.

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MATERIAL SAFETY DATA SHEET

NAVIGATOR ENGINEERING, INC

PRODUCT

NALCO 9843 FLOTATION REAGENT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment, doing maintenance or handling product. Examples of
impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed).

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: MODERATE.

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR:	Clear to hazy green/gray	FORM: Liquid
ODOR:	Organic	
DENSITY:	7.0-7.7 lbs/gal.	
SOLUBILITY IN WATER:	Partially	
SPECIFIC GRAVITY:	0.84-0.93 @ 60 Degrees F	ASTM D-1298
pH (NEAT) =	4.6	ASTM E-70
VISCOSITY:	20 cps	ASTM D-2983
FREEZE POINT:	Less than -50 Degrees F	ASTM D-1177
FLASH POINT:	110-120 Degrees F (ICC)	ASTM D-56

NOTE: These physical properties are typical values for this product.

SECTION 10 STABILITY AND REACTIVITY

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which
can generate heat, fires, explosions and the release of toxic fumes

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO2 may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 11 TOXICOLOGICAL INFORMATION

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1198
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TOXICITY STUDIES: Toxicity studies have been conducted on a similar product along with toxicity studies on the hazardous ingredient(s) in Section 2. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS):
Product LD50 = Greater than 5,000 mg/kg
2-Ethylhexanol = LD50 = 2.0-3.7 g/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS):
2-Ethylhexanol LD50 = 2.0 g/kg

ACUTE INHALATION TOXICITY (ALBINO RATS):
2-Ethylhexanol LC50 = 235 ppm (6-hour exposure)

OTHER TOXICITY RESULTS: Male and female rats fed diets containing 1.25% 2-ethylhexanol for 90 days showed evidence of kidney and liver effects. Rabbits exposed dermally to 2 ml/day for 12 days showed evidence of liver, lung, kidney, and heart effects. Rats receiving large oral doses of 2-EH showed evidence of hematological effects, stomach irritation, and effects on the liver, thymus, and spleen.

2-Ethylhexanol (2-EH) has been reported to be teratogenic (i.e., to cause birth defects) in laboratory rats when administered once orally at two dose levels (1 and 2 ml/kg) to pregnant Wistar rats on day 12 of gestation. The rats were killed on day 20, and the percent surviving fetuses with malformations had increased from 0.0% in the control group to 2.0% in the low dose group, and to 22.2% in the high dose group. There is a possibility that maternal toxicity played a role in the observed effects.

Two subsequent studies have indicated that 2-EH does not cause birth defects in rats when administered by inhalation at the maximum vapor concentration (850 mg/kg), or dermally at the maximum dose that could be applied practically (3 ml/kg). Preliminary information indicates that 2-EH is absorbed through human skin at a slower rate than through rat skin.

Based on the above information, it is believed that occupational exposure to 2-EH by the inhalation or dermal route poses no significant threat to the embryo/fetus and no longer imposes a restrictive job category to women of child-bearing capability.

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MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 9843 FLOTATION REAGENT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) 1-M-ALERT

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization the potential human hazard is: MODERATE.

SECTION 12 ECOLOGICAL INFORMATION

AQUATIC DATA: Results below are based on a similar product.

96 hour static acute LC50 to Rainbow Trout = 60 mg/L

96 hour no observed effect concentration is 25 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Moderately toxic

96 hour static acute LC50 to Fathead Minnow = 77 mg/L

96 hour no observed effect concentration is 40 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Moderately toxic

48 hour static acute LC50 to Daphnia magna = 52 mg/L

48 hour no observed effect concentration is 15 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Moderately toxic

If released into the environment, see CERCLA in Section 15.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: MODERATE. Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: MODERATE.

SECTION 13 DISPOSAL CONSIDERATIONS

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NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 9843 FLOTATION REAGENT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be incinerated in accordance with local, state and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES (UNLESS SPECIFIED BELOW)	:	COMBUSTIBLE LIQUID, N.O.S.
AIR TRANSPORTATION	:	FLAMMABLE LIQUID, N.O.S.
MARINE TRANSPORTATION	:	FLAMMABLE LIQUID, N.O.S.
UN/ID NO	:	NA 1993
HAZARD CLASS - PRIMARY	:	3 - COMBUSTIBLE LIQUID
PACKING GROUP	:	III
IMDG PAGE NO	:	3345
IATA PACKING INSTRUCTION	:	CARGO: 310
IATA CARGO AIRCRAFT LIMIT	:	220 L (MAX NET QUANTITY PER PACKAGE)
FLASH POINT	:	110 F 43.3 C
TECHNICAL NAME(S)	:	ALIPHATIC ALCOHOLS
RQ LBS (PER PACKAGE)	:	25,000
RQ COMPONENT(S)	:	BUTYL ALCOHOL

SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

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MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 9843 FLOTATION REAGENT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, the following ingredients in this product are hazardous and the reasons are shown below.

C2-C12 alcohols, aldehydes and esters - Combustible
n-Butanol - Flammable, target organ effects
2-Ethylhexanol - Combustible
2-Ethylhexanal - Combustible, irritant
2-Ethylhexenal - Irritant

Butanol = Ceiling 50 ppm (skin), 152 mg/m3 ACGIH/TLV

Butanol = Ceiling 50 ppm (skin), 150 mg/m3 OSHA/PEL

CERCLA/SUPERFUND, 40 CFR 117, 302:
This product contains butanol, a Reportable Quantity (RQ) substance; and if 25,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D.C. (1-800-424-8802).

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

XX Immediate (acute) health hazard
-- Delayed (chronic) health hazard
XX Fire hazard
-- Sudden release of pressure hazard
-- Reactive hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely

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MATERIAL SAFETY DATA SHEET P.A.M.

PRODUCT

NALCO 9843 FLOTATION REAGENT

Emergency Telephone Number
Medical (800) 462-5376 (24 hours) (800) I-M-ALERT

hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product contains the following ingredient(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals.

n-Butanol	71-36-3	10-20

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15/ formerly Sec. 307, 40 CFR 116/formerly Sec. 311:
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):
This product contains the following ingredients covered by the Clean Air Act:

2-Ethylhexanol - Section 111
n-Butanol - Section 111

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:
This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

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BY P.A.M.

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MATERIAL SAFETY DATA SHEET

PRODUCT

OPTIMER 9880 PULV FLOCCULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: OPTIMER 9880 PULV FLOCCULANT
DESCRIPTION: An acrylamide/acrylate polymer

NFPA 704M/HMIS RATING 1/1 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

Our hazard evaluation of the ingredient(s) under OSHA's Hazard Communication Rule, 29 CFR 1910.1200 has found none of the ingredient(s) hazardous.

SECTION 03 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
CAUTION! May cause irritation to skin and eyes. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Avoid breathing dust. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: May cause irritation with prolonged contact.
SKIN CONTACT: May cause irritation with prolonged contact.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 04 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Flush with water for 15 minutes.
INGESTION: Do not induce vomiting. Give water. Call a physician.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: Degrees F (PMCC) ASTM D-93

EXTINGUISHING MEDIA: Not applicable. Use extinguishing media appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve NOx or SOx under fire conditions.

SECTION 06 ACCIDENTAL RELEASE MEASURES

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1198
AREA (630) 305-1000

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MATERIAL SAFETY DATA SHEET

PRODUCT

OPTIMER 9880 PULV FLOCCULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

Solid spills: Sweep or vacuum up and reclaim into recovery or salvage drums for disposal. Wear the protective equipment specified in Section 8. Refer to CERCLA in Section 15.

SECTION 07 HANDLING AND STORAGE

Storage : Keep container closed when not in use.

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection not normally needed. If significant dusting occurs, wear either a disposable dust mask or a cartridge respirator with prefilter or high efficiency cartridge.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: If significant dusting occurs, local exhaust ventilation is recommended.

PROTECTIVE EQUIPMENT: No special precautions. Avoid eye and skin contact, and inhalation of dust.

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: HIGH.

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR:	White	FORM:	Powder
ODOR:	Slight		
BULK DENSITY:	50 lbs/ft3		
SOLUBILITY IN WATER:	Completely		
pH (a5 0.25%) =	7.4		ASTM E-70
FLASH POINT:	Not applicable		

NOTE: These physical properties are typical values for this product.

SECTION 10 STABLILITY AND REACTIVITY

INCOMPATIBILITY: None known

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion, CO, CO2, NOx, SOx, may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 11 TOXICOLOGICAL INFORMATION

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1198
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MATERIAL SAFETY DATA SHEET

PRODUCT

OPTIMER 9880 PULV FLOCCULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

TOXICITY STUDIES: No toxicity studies have been conducted on this product.

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization, the potential human hazard is: LOW

SECTION 12 ECOLOGICAL INFORMATION

AQUATIC DATA:

48 hour static acute EC50 to Ceriodaphnia dubia = 8.3 ppm

7-day static renewal chronic EC50 to Ceriodaphnia dubia = 3.3-10.8 ppm

7-day no observed effect concentration is based on no mortality or abnormal effects.

If released into the environment, see CERCLA in Section 15.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: LOW. Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: LOW.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous solid waste, it can be disposed of in an industrial waste landfill in accordance with local, state, and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, none of the ingredients in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302:
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1198
AREA (630) 305-1000

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

OPTIMER 9880 PULV FLOCCULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15/ formerly Sec. 307, 40 CFR 116/formerly Sec. 311:
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):

This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:
This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
This product does not contain ingredients listed by State Right To Know Laws.

INTERNATIONAL REGULATIONS:

This is not a WHMIS controlled product under The House of Commons of Canada Bill C-70.

SECTION 16 OTHER INFORMATION

None

SECTION 17 RISK CHARACTERIZATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general

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NALCO ENGINEERING, INC
BY P.A.M.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

OPTIMER 9880 PULV FLOCCULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: LOW.

* The environmental risk is: LOW.

Any use inconsistent with Nalco's recommendations may affect our risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 18 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (CD-ROM version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (CD-ROM version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), Micromedex, Inc., Englewood, CO.

Shepard's Catalog of Teratogenic Agents (CD-ROM version), Micromedex, Inc., Englewood, CO.

Suspect Chemicals Sourcebook (a guide to industrial chemicals covered under major regulatory and advisory programs), Roytech Publications (a Division of Ariel Corporation), Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, Washington (CD-ROM version), Micromedex, Inc., Englewood, CO.

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety

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NEW RIVER ENGINEERING, INC
BY P.A.M.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

OPTIMER 9880 PULV FLOCCULANT

Emergency Telephone Number
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

DATE CHANGED: 06/24/1997 DATE PRINTED: 03/28/1999

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AREA (630) 305-1000

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CORRECTION DATE 11/29/00
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BY P.A.M.

MATERIAL SAFETY DATA SHEET

NALCO

PRODUCT

NALCO 9850 (WT2900) CATIONIC

Emergency Telephone Number

Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NALCO 9850 (WT2900) CATIONIC
DESCRIPTION: A polyamine

NFPA 704M/HMIS RATING 1/2 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

Our hazard evaluation has identified one or more hazardous ingredient(s) under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Their identity is being claimed a trade secret. Consult Section 15 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
Organic cationic polyelectrolyte	Proprietary	100

SECTION 03 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
WARNING! Causes eye irritation. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause mild to moderate irritation.
SKIN CONTACT: May cause irritation with prolonged contact.
INHALATION: May cause irritation to the respiratory tract and lungs.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 04 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Wash thoroughly with soap and rinse with water. If irritation persists, call a physician.
INGESTION: Do not induce vomiting. Give water. Call a physician.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

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MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 9850 (WT2900) CATIONIC

Emergency Telephone Number

Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 04 FIRST AID INFORMATION (CONTINUED)

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: Not applicable

EXTINGUISHING MEDIA: Not applicable. Use extinguishing media appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve NOx under fire conditions.

SECTION 06 ACCIDENTAL RELEASE MEASURES

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

For large indoor spills, evacuate employees and ventilate area. Those responsible for control and recovery should wear the protective equipment specified in Section 8 .

Solid spills: Sweep or vacuum up and reclaim into recovery or salvage drums for disposal. Wear the protective equipment specified in Section 8 . Refer to CERCLA in Section 15.

SECTION 07 HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes, and clothing.

Storage : Keep container closed when not in use.

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection not normally needed. If significant dusting occurs, wear either a disposable dust mask or a cartridge respirator with prefilter or high efficiency cartridge.

VENTILATION: If significant dusting occurs, local exhaust ventilation is

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AREA 630-305-1000

SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION (CONTINUED)

recommended.

PROTECTIVE EQUIPMENT: No special precautions. Avoid eye and skin contact, and inhalation of dust.

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: MODERATE.

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: White	FORM: Free-flowing powder
SOLUBILITY IN WATER:	Completely
FLASH POINT:	Not applicable

NOTE: These physical properties are typical values for this product.

SECTION 10 STABLILITY AND REACTIVITY

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

STORAGE: Avoid exposure to moisture. Product becomes slippery and difficult to handle when wet.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO_2, NOx, HCl may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 11 TOXICOLOGICAL INFORMATION

TOXICITY STUDIES: No toxicity studies have been conducted on this product.

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization, the potential human hazard is: MODERATE.

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 9850 (WT2900) CATIONIC

Emergency Telephone Number

Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

SECTION 12 ECOLOGICAL INFORMATION

If released into the environment, see CERCLA in Section 15.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: HIGH. Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: MODERATE.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous solid waste, it can be disposed of in an industrial waste landfill in accordance with local, state, and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Organic cationic polyelectrolyte - Irritant

Product = TWA 10 mg/m3 (nuisance dust) ACGIH/TLV

Product (nuisance particles) = TWA 10 mg/m3 (total dust)
5 mg/m³ (respirable dust) OSHA/PEL

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AREA 630-305-1000

SECTION 15 REGULATORY INFORMATION (CONTINUED)

CERCLA/SUPERFUND, 40 CFR 117, 302:
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

XX Immediate (acute) health hazard
-- Delayed (chronic) health hazard
-- Fire hazard
-- Sudden release of pressure hazard
-- Reactive hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15/ formerly Sec. 307, 40 CFR 116/formerly Sec. 311:
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments),
Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):
This product does not contain ingredients covered by the Clean Air Act.

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AREA 630-305-1000

SECTION 15 REGULATORY INFORMATION (CONTINUED)

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:
This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
This product does not contain ingredients listed by State Right To Know Laws.

INTERNATIONAL REGULATIONS:

This is a WHMIS controlled product under The House of Commons of Canada Bill C-70 (Class D2B). The product contains the following substance(s), from the Ingredient Disclosure List or has been evaluated based on its toxicological properties, to contain the following hazardous ingredient(s):

Chemical Name	CAS #	% Concentration Range
Organic cationic polyelectrolyte	Proprietary	100

SECTION 16 OTHER INFORMATION

Nalco internal number CPS081292

SECTION 17 RISK CHARACTERIZATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: MODERATE.

* The environmental risk is: MODERATE.

Any use inconsistent with Nalco's recommendations may affect our risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

SECTION 17 RISK CHARACTERIZATION (CONTINUED)

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 18 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (CD-ROM version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (CD-ROM version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), Micromedex, Inc., Englewood, CO.

Shepard's Catalog of Teratogenic Agents (CD-ROM version), Micromedex, Inc., Englewood, CO.

Suspect Chemicals Sourcebook (a guide to industrial chemicals covered under major regulatory and advisory programs), Roytech Publications (a Division of Ariel Corporation), Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle,

SECTION 18 REFERENCES (CONTINUED)

Washington (CD-ROM version), Micromedex, Inc., Englewood, CO.

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety
DATE CHANGED: 03/10/1993 DATE PRINTED: 06/21/1997

file: MSDS

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NEW RIVER ENGINEERING, INC
BY P.A.M.

MARATHON ASHLAND PETROLEUM LLC

P.O. BOX 391, ASHLAND, KENTUCKY 41101
(606) 329-3333

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

24-HOUR EMERGENCY TELEPHONE: 1-800-ASHLAND OR 1-800-274-5263

PRODUCT NAME: ASHLAND MAGNALIME^{tm} Spent Lime MSDS NO: 0204849-001.001
Page 1 of 4 PREPARED:
03/26/1996 PRINT DATE:

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: QUICKLIME-MAGNESIA MIXTURE
DOT HAZARD CLASSIFICATION: NOT APPLICABLE

SECTION II-COMPONENTS

SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT(s)		PERCENT	NOTE
CALCIUM OXIDE		27 - 36	(1)
CAS #: 1305-78-8	PEL: 5 MG/M3	TLV: 2 MG/M3	
CALCIUM SULFATE		37 - 46	(2)
CAS #: 7778-18-9	PEL: 15 MG/M3	TLV: 10 MG/M3	
MAGNESIUM OXIDE		17 - 23	
CAS #: 1309-48-4	PEL: 50 MG/M3	TLV: 10 MG/M3	
DOLOMITE		Tr-5	(3)
CAS #: 16389-88-1	PEL: 15 MG/M3	TLV: 10 MG/M3	
CALCIUM CARBONATE		Tr-5	(4)
CAS #: 471-34-1	PEL: 15 MG/M3	TLV: 10 MG/M3	
CALCIUM HYDROXIDE		<1	(5)
CAS #: 1305-62-0	PEL: 5 MG/M3	TLV: 5 MG/M3	
Inerts, i.e SILICON DIOXIDE		1-9	
CAS #: 7631-86-9		TLV: 10 MG/M3	

(1): MAGNALIME CONTAINS 1.00% ALUMINUM(CAS#7429-90-5) WHICH APPEARS ON THE SARA SECTION 313 LIST OF TOXIC CHEMICALS.
(2): PEL AND TLV ARE FOR TOTAL NUISANCE PARTICULATES.
(3): PEL AND TLV ARE FOR TOTAL NUISANCE PARTICULATES.
(4): PEL AND TLV ARE FOR TOTAL NUISANCE PARTICULATES.
(5): THE OSHA PEL FOR CALCIUM HYDROXIDE OF 5 MG/M3 IS NOT IN EFFECT AS A RESULT OF RECONSIDERATION. CALCIUM HYDROXIDE REMAINS REGULATED AS A PARTICULATE AT THE PEL OF 5 MG/M3 RESPIRABLE DUST AND 15 MG/M3 TOTAL DUST.

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RIVER ENGINEERING, INC.
R.A.M.

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
BOILING POINT	NOT APPLICABLE	
VAPOR PRESSURE	NOT APPLICABLE	
SPECIFIC VAPOR DENSITY	NOT APPLICABLE	
SPECIFIC GRAVITY		GREATER THAN WATER
PERCENT VOLATILES	NOT APPLICABLE	
EVAPORATION RATE	NOT APPLICABLE	
APPEARANCE		TAN
STATE		SOLID
FORM		HETER MIXT

SECTION IV-FIRE AND EXPLOSION INFORMATION

FLASH POINT NOT APPLICABLE
EXPLOSIVE LIMIT NOT APPLICABLE
EXTINGUISHING MEDIA: NOT APPLICABLE
HAZARDOUS DECOMPOSITION PRODUCTS: NOT APPLICABLE
FIREFIGHTING PROCEDURES: WEAR A SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WITH APPROPRIATE TURN-OUT GEAR AND CHEMICAL RESISTANT PERSONAL PROTECTIVE EQUIPMENT. REFER TO THE PERSONAL PROTECTIVE EQUIPMENT SECTION OF THIS MSDS.
SPECIAL FIRE & EXPLOSION HAZARDS: NO SPECIAL FIRE HAZARDS ARE KNOWN TO BE ASSOCIATED WITH THIS PRODUCT.
NFPA CODES: HEALTH- 1 FLAMMABILITY- 0 REACTIVITY- 0
REACTS WITH WATER TO GENERATE HEAT AND STEAM.

SECTION V-HEALTH HAZARD DATA

EFFECTS OF ACUTE OVEREXPOSURE:

EYES - EXPOSURE CAUSES SEVERE EYE IRRITATION. SYMPTOMS MAY INCLUDE STINGING, TEARING, REDNESS, SWELLING AND EYE DAMAGE.
LD50 FOR PRODUCT:>5G/KG ORAL RAT.
CONTACT WITH SKIN IN THE PRESENCE OF SMALL AMOUNTS OF MOISTURE SUCH AS PERSPIRATION MAY CAUSE SKIN IRRITATION OR BURNS.
BREATHING - EXPOSURE TO DUST IS POSSIBLE.
SYMPTOMS MAY INCLUDE:
-IRRITATION (NOSE, THROAT, RESPIRATORY TRACT)- PRE-EXISTING LUNG DISORDERS, E.G. ASTHMA-LIKE CONDITIONS, MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL.
SWALLOWING - NOT EXPECTED TO RESULT IN HARMFUL EFFECTS.

FIRST AID:

IF ON **SKIN**: REMOVE CONTAMINATED CLOTHING. FLUSH EXPOSED AREA WITH LARGE AMOUNTS OF WATER. IF SKIN IS DAMAGED, SEEK IMMEDIATE MEDICAL ATTENTION. IF SKIN IS NOT DAMAGED AND SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION. LAUNDER CLOTHING BEFORE REUSE.

IF IN **EYES**: IF MATERIAL GETS INTO THE EYES, IMMEDIATELY FLUSH EYES GENTLY WITH WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS APART. IF SYMPTOMS DEVELOP AS A RESULT OF VAPOR EXPOSURE, IMMEDIATELY MOVE INDIVIDUAL AWAY FROM EXPOSURE AND INTO FRESH AIR BEFORE FLUSHING AS RECOMMENDED ABOVE. SEEK IMMEDIATE MEDICAL ATTENTION.

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NEW RIVER ENGINEERING, INC
BY P.A.M.

IF SWALLOWED: DO NOT INDUCE VOMITING. THIS MATERIAL IS AN ASPIRATION HAZARD. IF INDIVIDUAL IS DROWSY OR UNCONSCIOUS, PLACE ON LEFT SIDE WITH THE HEAD DOWN. SEEK MEDICAL ATTENTION. IF POSSIBLE, DO NOT LEAVE INDIVIDUAL UNATTENDED.
IF BREATHED: IF SYMPTOMS DEVELOP, IMMEDIATELY MOVE INDIVIDUAL AWAY FROM EXPOSURE AND INTO FRESH AIR. SEEK IMMEDIATE MEDICAL ATTENTION; KEEP PERSON WARM AND QUIET. IF PERSON IS NOT BREATHING, BEGIN ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION
INGESTION
SKIN CONTACT

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR
STABILITY: STABLE
INCOMPATIBILITY: AVOID CONTACT WITH:, STRONG MINERAL ACIDS., WATER

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: SWEEP UP SOLID, NEUTRALIZE AND MOP UP SOLUTION.
LARGE SPILL: PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. SHOVEL MATERIAL INTO CONTAINERS. THOROUGHLY SWEEP AREA OF SPILL TO CLEAN UP ANY RESIDUAL MATERIAL.

WASTE DISPOSAL METHOD:

SMALL SPILL: DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
LARGE SPILL: DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR INDUSTRIAL HYGIENIST). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.
VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).
PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, NEOPRENE
EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. CONSULT YOUR SAFETY REPRESENTATIVE.
OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SHEET ADDED
PAGE # 77 1
CORRECTION #
CORRECTION DATE 11/29/00
NEW RIVER ENGINEERING, INC
P.A.M.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED.SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED.
THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

SECTION X-LABEL INFORMATION

INHALATION OF DUST MAY CAUSE IRRITATION OF NASAL AND RESPIRATORY PASSAGES.

HANDLING & STORAGE:

AVOID CONTACT WITH EYES AND SKIN.
KEEP CONTAINER TIGHTLY CLOSED AND AWAY FROM WATER OR ACIDS.
REACTS WITH WATER TO GENERATE HEAT AND STEAM.
WEAR SAFETY GLASSES OR GOGGLES, RESISTANT GLOVES, AND OTHER APPROPRIATE PROTECTIVE EQUIPMENT ESSENTIAL FOR YOUR OPERATION.
MINIMIZE EXPOSURE THROUGH GOOD HYGIENIC PRACTICES.
DO NOT TRANSFER TO UNLABELED CONTAINER.
DO NOT USE CUTTING OR WELDING TORCH ON THIS CONTAINER (EVEN EMPTY).
WEAR SAFETY GLASSES OR GOGGLES, RESISTANT GLOVES, AND OTHER APPROPRIATE PROTECTIVE EQUIPMENT ESSENTIAL FOR YOUR OPERATION.

FIRST AID:

EYES: IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES WHILE LIFTING UPPER AND LOWER EYELIDS. DO NOT USE CHEMICAL ANTIDOTE. GET MEDICAL ATTENTION IMMEDIATELY.
SKIN: IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION IMMEDIATELY.
INHALATION: IF AFFECTED, REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GET MEDICAL ATTENTION.
INGESTION: DO NOT INDUCE VOMITING. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

CHRONIC INFORMATION:

CONTAINS: CALCIUM AND MAGNESIUM COMPOUNDS.
*** COMPONENTS APPEAR IN SECTION II ***

*** END OF MSDS ***

Appendix II-H

MATERIAL SAFETY DATA SHEETS (MSDSs)

POWER MOUNTAIN

MATERIAL SAFETY DATA SHEET

PAGE:	1 of 5
REVISION DATE:	07/30/2002
PRINT DATE:	10/16/2002

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

FLOMIN

FLOERGER® EM 533

OK

Supplier .

CHEMTALL INCORPORATED
PO Box 250
Riceboro, Georgia 31323
Tel : 912-884-3366 Fax : 912-884-5031

2. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation : Anionic water-soluble polymer

Identification of the substance :

3. HAZARDS IDENTIFICATION

Spills produce extremely slippery surfaces.

4. FIRST AID MEASURES

Inhalation : Move to fresh air.

Skin contact : Wash off immediately with soap and plenty of water. In case of persistent skin irritation, consult a physician.

Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. In case of persistent eye irritation, consult a physician.

Ingestion : The product is not considered toxic based on studies on laboratory animals.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water, water spray, foam, dry powder, carbon dioxide (CO2)

Special fire-fighting precautions : Spills produce extremely slippery surfaces.

Protective equipment for firefighters : No special protective equipment required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : No special precautions required.

Environmental precautions : Do not contaminate water.

Methods for cleaning up : Do not flush with water. Dam up. Soak up with inert absorbent material. If liquid has been spilled in large quantities clean up promptly by scoop or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling : Avoid contact with skin and eyes. When preparing the working solution ensure there is adequate ventilation. When using do not smoke.

Storage : Keep in a dry, cool place (0 - 30°C). When preparing the working solution ensure there is adequate ventilation. Freezing will affect the physical condition and may damage the material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls : Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Personal protection equipment

- ***Respiratory protection :*** In case of insufficient ventilation wear suitable respiratory equipment.
- ***Hand protection :*** Rubber gloves.
- ***Eye protection :*** Safety glasses with side-shields. Do not wear contact lenses
- ***Skin protection :*** Chemical resistant apron or protective suit if splashing or contact with solution is likely.

Hygiene measures : Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form :	viscous liquid
Color :	milky
Odor :	aliphatic
pH :	6-8@ 5 g/l for product series. See Technical Bulletin for specific value.
Melting point (°C) :	Not applicable.
Flash point (°C) :	Does not flash
Autoignition temperature (°C) :	Does not ignite
Vapour pressure (mm Hg) :	0.002 @ 20°C

Bulk density :	See Technical Bulletin
Water solubility :	See Technical Bulletin
Viscosity (mPa s) :	See Technical Bulletin

10. STABILITY AND REACTIVITY

Stability :	Product is stable, No hazardous polymerization will occur.. Oxidizing agents may cause exothermic reactions.
Hazardous decomposition products :	Thermal decomposition may produce : carbon oxides, nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Acute toxicity

- Oral :	LD50/oral/rat > 5000 mg/kg
- Dermal :	The product is not expected to be toxic in contact with the skin.
- Inhalation :	The product is not expected to be toxic by inhalation.

Irritation

- Skin :	May cause skin irritation with susceptible persons.
- Eyes :	May cause eye irritation with susceptible persons.
Sensitization :	The product is not expected to be sensitizing.
Chronic toxicity :	Prolonged skin contact may defat the skin and produce dermatitis.

12. ECOLOGICAL INFORMATION

- Fish	LC50/Danio rerio/96 hr > 100 mg/L (OECD 203) (Based on the toxicity of the components using the Conventional Method.)
- Algae :	IC50/Scenedesmus subspicatis/72 hr > 100 mg/L (OECD 201)(Based on the toxicity of the components using the Conventional Method.)
- Daphnia :	EC50/Daphnia magna/48 hr > 100 mg/L (OECD 202) (Based on the toxicity of the components using the Conventional Method.)
Persistence / degradability :	Not readily biodegradable

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : In accordance with federal, state and local regulations.

Contaminated packaging : Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local regulations

14. TRANSPORT INFORMATION

Not regulated by DOT.

15. REGULATORY INFORMATION

All components of this product are on the TSCA and DSL inventories.

RCRA status : Not a hazardous waste.

Hazardous waste number : Not applicable

Reportable quantity (40 CFR 302) : Not applicable

Threshold planning quantity (40 CFR 355) Not applicable

California Proposition 65 Information : *The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:* This product contains a chemical(s) known to the State of California to cause cancer : residual acrylamide.

HMIS & NFPA Ratings	HMIS	NFPA
Health :	1	1
Flammability :	1	1
Reactivity :	0	0

16. OTHER INFORMATION

Person to contact : Regulatory Affairs Manager

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

16. OTHER INFORMATION

Person to contact : Regulatory Affairs Manager

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

FREEDOM INDUSTRIES, INC.
MATERIAL SAFETY DATA SHEET

Product Name: **EnviroFloc CF-1**

Preparation date: 8/6/03

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS REVISION #: 004

PRODUCT NAME: EnviroFloc CF-1

SYNONYMS: None

DISTRIBUTED BY: Freedom Industries, Inc.
P.O. Box 2181
Charleston, WV 25328

PHONE NUMBER: (304) 344-3997

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	%	CAS No.	Exposure Limits
Polyaluminum hydroxychlorosulfate	15-40	Proprietary	OSHA PEL (as Al) 15 mg/M^3 (total dust) 5 mg/M^3 (respirable)
Water	60-85	7732-18-5	Not established

SECTION 3 - HAZARDS IDENTIFICATION

********** **EMERGENCY OVERVIEW** **********

Product is a clear to slightly hazy liquid. It causes severe irritation to skin and eyes. Mists or vapors may cause severe irritation to the respiratory tract. Harmful if swallowed.

Avoid contact with skin, eyes and clothing. Wear protective goggles and gloves and impervious clothing when handling this product. Wash thoroughly after handling.

****

POTENTIAL HEALTH EFFECTS

EYES:

Liquid causes severe irritation, which may result in permanent eye damage.

Section 3 continued on next page

SECTION 3 - HAZARDS IDENTIFICATION (continued)

SKIN:

Causes severe irritation, even burns upon prolonged contact. Persons with pre-existing skin conditions are particularly susceptible.

INGESTION (swallowing):

Causes severe irritation to the mouth, throat and digestive tract.

INHALATION (breathing):

Spray or mist can cause sore throat and irritation, which may be severe.

CHRONIC EFFECTS/CARCINOGENICITY:

This product (or component) is not listed in IARC Monographs, the NTP Ninth Annual Report or the ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get immediate medical attention. Do not use chemical antidote.

SKIN CONTACT:

Immediately flush exposed area with water for at least 15 minutes, then wash with soap and water. If reddening persists, or if open sores or blisters develop, see a physician. Remove contaminated clothing and launder before re-use.

INGESTION (swallowing):

If conscious, immediately give two large glasses of milk, if available, or water. Never give anything by mouth to an unconscious person. Do **not** induce vomiting; vomiting may further damage the mouth and throat. Call a physician.

INHALATION (breathing):

Immediately move to fresh air. If breathing has stopped, give artificial respiration. Get immediate medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >212° F (100° C)

FLASH POINT METHOD: PMCC

UPPER EXPLOSION LIMIT: Unavailable
LOWER EXPLOSION LIMIT: Unavailable
AUTOIGNITION TEMPERATURE: Unavailable

EXTINGUISHING MEDIA:

Dry chemical, water fog, and regular foam

FIRE AND EXPLOSION HAZARDS:

None known. Product contains a large amount of water, and would not normally burn.

FIRE-FIGHTING EQUIPMENT:

Keep personnel removed from and upwind. Vapors are corrosive. Wear full protective clothing and self-contained breathing apparatus with full face-piece. Cool containers with water. Combustion products include aluminum compounds, hydrogen chloride, sulfur and nitrogen compounds, carbon monoxide and carbon dioxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Persons not wearing protective equipment should be excluded from the area of the spill until clean up has been completed. Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, floor absorbent or other non-combustible absorbent material and shovel into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING:

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Always add caustic to water while stirring - never add water to caustic.

STORAGE:

Keep in closed or covered containers when not in use. Store in cool dry place with adequate ventilation. Do not store in steel, aluminum, copper or brass containers.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

A NIOSH/MSHA approved respirator is recommended where there is insufficient ventilation to maintain exposures below established exposure limits or levels of overexposure.

SKIN PROTECTION:

Wear protective gloves such as Neoprene or BUNA-N.

EYE PROTECTION:

Chemical splash goggles in compliance with OSHA regulations and full face-shield are advised.

OTHER PROTECTION:

Impervious clothing and boots are recommended. Leather shoes and boots cannot be decontaminated if soaked with liquid material.

ENGINEERING CONTROLS:

Provide sufficient ventilation to maintain exposure below level of overexposure and established exposure limits. Maintain eye wash fountains and quick-drench facilities in work area.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear to slightly hazy liquid @ 68° F (20° C)
SPECIFIC GRAVITY:	1.21
VAPOR PRESSURE (mm Hg):	17.5 @ 68° F (20° C)
VAPOR DENSITY (Air = 1):	Unavailable
INITIAL BOILING POINT:	~220° F (104° C)
EVAPORATION RATE: (Ethyl Ether = 1)	<1
SOLUBILITY in WATER:	100%
VOLATILE %:	>60%
pH:	2.5-4.5
pH METHOD:	As is

SECTION 10 - STABILITY AND REACTIVITY

STABILITY (conditions to avoid):
Stable under normal conditions.

INCOMPATIBILITIES (materials to avoid):
Avoid contact with oxidizers and strong bases

DECOMPOSITION:
Decomposition can produce aluminum, sulfur and nitrogen compounds and hydrogen chloride.

HAZARDOUS POLYMERIZATION:
Not known to occur

SECTION 11 - TOXICOLOGICAL INFORMATION

InVitro DOT Skin Corrosive Study – Not corrosive

SECTION 12 - ECOLOGICAL INFORMATION

No data available for product

SECTION 13 - DISPOSAL CONSIDERATIONS

Material that cannot be recovered or recycled should be sent to an approved hazardous waste disposal facility for neutralization and disposal. Material collected on absorbent material may be deposited in a landfill in accordance with all applicable local, state and federal regulations.

This product, if disposed of, is not considered a hazardous waste under current RCRA definitions.

SECTION 14 - TRANSPORT INFORMATION

This material is corrosive to aluminum or steel only. It is **NOT** subject to packaging, labeling, placarding or shipping paper requirements, or any other part of the DOT hazardous materials regulations when shipped by motor vehicle or rail only in packaging compatible with the product [49CFR173.154(d)].

If not shipped in accordance with the above, the DOT shipping description is: Corrosive liquid, acidic, inorganic, N.O.S. (contains polyaluminum hydroxychlorosulfate), 8 (corrosive), UN 3264, PG III

SECTION 15 - REGULATORY INFORMATION

TSCA INFORMATION:

All components in this product are in compliance with TSCA Inventory requirements.

SARA 313 INFORMATION:

SARA requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level that could require reporting under the statute are: None

SECTION 16 - OTHER INFORMATION

HAZARD RATING:

HEALTH	2	0 - LEAST
FIRE	0	1 - SLIGHT
REACTIVITY	0	2 - MODERATE
OTHER	-	3 - HIGH
		4 - EXTREME

HAZARD RATING METHOD: NFPA

REASON FOR REVISION:

Modified Section 14 to reduce confusion on shipping requirements.

The product information contained herein is believed to be accurate as of the date of the Material Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage.

****END OF REPORT****

FREEDOM INDUSTRIES, INC.
MATERIAL SAFETY DATA SHEET

Product Name: **HAR Z-3**

Preparation date: 6/30/04

SAIT H2O (Humic Acid Remover.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS REVISION #: New

PRODUCT NAME: HAR Z-3

SYNONYMS: None

DISTRIBUTED BY: Freedom Industries, Inc.
P.O. Box 2181
Charleston, WV 25328

PHONE NUMBER: (304) 344-3997

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	%	CAS No.	Exposure Limits
Calcium chloride	30-40	10043-52-4	Not established
Water	60-70	7732-18-5	Not established
Inorganic modifier	1-5	Proprietary	Not established

SECTION 3 - HAZARDS IDENTIFICATION

********** **EMERGENCY OVERVIEW** **********

Product is a clear, colorless, odorless liquid. The material can cause skin and eye irritation. Avoid contact with skin, eyes and clothing. Wear protective goggles and gloves and impervious clothing when handling this product. Wash thoroughly after handling.

****

POTENTIAL HEALTH EFFECTS

EYES:

Can cause irritation, which may be severe.

Section 3 continued on next page

SECTION 3 - HAZARDS IDENTIFICATION (continued)

SKIN:

Prolonged or repeated contact may cause irritation. Persons with pre-existing skin conditions are particularly susceptible.

INGESTION (swallowing):

Causes irritation. May cause nausea, vomiting and diarrhea.

INHALATION (breathing):

Spray or mist can cause irritation to the nose, throat and lungs.

CHRONIC EFFECTS/CARCINOGENICITY:

This product (or component) is not listed in IARC Monographs, the NTP Ninth Annual Report or the current ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.

SKIN CONTACT:

Immediately wash exposed area with soap and water. Remove contaminated clothing and launder before reuse.

INGESTION (swallowing):

Immediately drink two large glasses of water. Induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

INHALATION (breathing):

If affected, move to fresh air.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >212° F (100° C)

FLASH POINT METHOD: PMCC

UPPER EXPLOSION LIMIT: Unavailable
LOWER EXPLOSION LIMIT: Unavailable
AUTOIGNITION TEMPERATURE: Unavailable

EXTINGUISHING MEDIA:

Dry chemical, water fog, and regular foam

FIRE AND EXPLOSION HAZARDS:

None known. Product contains a large amount of water, and would not normally burn.

FIRE-FIGHTING EQUIPMENT:

Keep personnel removed from and upwind. Wear full protective clothing and self-contained breathing apparatus with full face-piece. Cool containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Persons not wearing protective equipment should be excluded from the area of the spill until clean up has been completed. Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, floor absorbent or other absorbent material and shovel into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING:

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

STORAGE:

Keep in closed or covered containers when not in use. Store in cool dry place with adequate ventilation.

FREEDOM INDUSTRIES, INC.
MATERIAL SAFETY DATA SHEET

Product Name: **HAR Z-3**

Preparation date: 6/30/04

SAIT H2O (Humic Acid Remover.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS REVISION #: New

PRODUCT NAME: HAR Z-3

SYNONYMS: None

DISTRIBUTED BY: Freedom Industries, Inc.
P.O. Box 2181
Charleston, WV 25328

PHONE NUMBER: (304) 344-3997

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	%	CAS No.	Exposure Limits
Calcium chloride	30-40	10043-52-4	Not established
Water	60-70	7732-18-5	Not established
Inorganic modifier	1-5	Proprietary	Not established

SECTION 3 - HAZARDS IDENTIFICATION

********** **EMERGENCY OVERVIEW** **********

Product is a clear, colorless, odorless liquid. The material can cause skin and eye irritation. Avoid contact with skin, eyes and clothing. Wear protective goggles and gloves and impervious clothing when handling this product. Wash thoroughly after handling.

****

POTENTIAL HEALTH EFFECTS

EYES:

Can cause irritation, which may be severe.

Section 3 continued on next page

SECTION 3 - HAZARDS IDENTIFICATION (continued)

SKIN:

Prolonged or repeated contact may cause irritation. Persons with pre-existing skin conditions are particularly susceptible.

INGESTION (swallowing):

Causes irritation. May cause nausea, vomiting and diarrhea.

INHALATION (breathing):

Spray or mist can cause irritation to the nose, throat and lungs.

CHRONIC EFFECTS/CARCINOGENICITY:

This product (or component) is not listed in IARC Monographs, the NTP Ninth Annual Report or the current ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.

SKIN CONTACT:

Immediately wash exposed area with soap and water. Remove contaminated clothing and launder before reuse.

INGESTION (swallowing):

Immediately drink two large glasses of water. Induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

INHALATION (breathing):

If affected, move to fresh air.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >212° F (100° C)

FLASH POINT METHOD: PMCC

UPPER EXPLOSION LIMIT: Unavailable
LOWER EXPLOSION LIMIT: Unavailable
AUTOIGNITION TEMPERATURE: Unavailable

EXTINGUISHING MEDIA:

Dry chemical, water fog, and regular foam

FIRE AND EXPLOSION HAZARDS:

None known. Product contains a large amount of water, and would not normally burn.

FIRE-FIGHTING EQUIPMENT:

Keep personnel removed from and upwind. Wear full protective clothing and self-contained breathing apparatus with full face-piece. Cool containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Persons not wearing protective equipment should be excluded from the area of the spill until clean up has been completed. Dike area of spill to prevent spreading and pump liquid to salvage tank. Absorb remaining liquid on vermiculite, floor absorbent or other absorbent material and shovel into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING:

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

STORAGE:

Keep in closed or covered containers when not in use. Store in cool dry place with adequate ventilation.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:
Not required under normal conditions of use.

SKIN PROTECTION:
Wear protective gloves such as Neoprene or BUNA-N.

EYE PROTECTION:
Chemical splash goggles in compliance with OSHA regulations are advised.

OTHER PROTECTION:
Impervious clothing and boots are recommended.

ENGINEERING CONTROLS:
Provide sufficient ventilation to maintain exposure below level of overexposure.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colorless liquid @ 68° F (20° C)
ODOR:	None
SPECIFIC GRAVITY:	>1
VAPOR PRESSURE (mm Hg):	17.5 @ 68° F (20° C)
VAPOR DENSITY (Air = 1):	Lighter than air
INITIAL BOILING POINT:	>212° F (100° C)
EVAPORATION RATE: (Ethyl Ether = 1)	<1
SOLUBILITY in WATER:	100%
VOLATILE %:	60-70%
pH:	Unavailable
pH METHOD:	Unavailable

SECTION 10 - STABILITY AND REACTIVITY

STABILITY (conditions to avoid):
Stable under normal conditions.

INCOMPATIBILITIES (materials to avoid):
Avoid contact with strong bases.

DECOMPOSITION:
Not available

HAZARDOUS POLYMERIZATION:
Not known to occur

SECTION 11 - TOXICOLOGICAL INFORMATION

No data available on product

SECTION 12 - ECOLOGICAL INFORMATION

No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

Material should be sent to a licensed waste treatment facility. Material collected on absorbent material may be deposited in a landfill in accordance with all applicable local, state and federal regulations.

This product, if disposed of, is not considered a hazardous waste under current RCRA definitions.

SECTION 14 - TRANSPORT INFORMATION

Not regulated under current DOT, IMO, or ICAO regulations.

SECTION 15 - REGULATORY INFORMATION

TSCA INFORMATION:

All components in this product are in compliance with TSCA Inventory requirements.

SARA 313 INFORMATION:

SARA requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level that could require reporting under the statute are: None

SECTION 16 - OTHER INFORMATION

HAZARD RATING:

HEALTH	1	0 - LEAST
FIRE	0	1 - SLIGHT
REACTIVITY	0	2 - MODERATE
OTHER	-	3 - HIGH
		4 - EXTREME

HAZARD RATING METHOD: NFPA

REASON FOR REVISION:

New MSDS

The product information contained herein is believed to be accurate as of the date of the Material Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage.

****END OF REPORT****

SOLUTIONS TECHNOLOGIES
P.O. BOX 2237
WILLIAMSON, WV 25661
606-237-0093

17

MATERIAL SAFETY DATA

MSDS No: 12786
Date: 01/14/2002
Supersedes: 08/14/2001

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **ACCOAL® 9628 Promoter** Frother

SYNONYMS: None

CHEMICAL FAMILY: Mixture

MOLECULAR FORMULA: Mixture

MOLECULAR WGT: Mixture

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WEST PATERSON, NEW JERSEY 07424, USA
For Product Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.
EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call CHEMTREC: 1-800/424-9300. Outside the USA and Canada call 1-703/527-3887.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS. NO.	%	TWA/CEILING	REFERENCE
No Permissible Exposure Limits (PEL/TLV) have been established by OSHA or ACGIH.				

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR: Dark brown viscous liquid with a mild organic odor.

STATEMENTS OF HAZARD:
CAUTION! MAY CAUSE EYE AND SKIN IRRITATION
COMBUSTIBLE LIQUID AND VAPOR

POTENTIAL HEALTH EFFECTS

EFFECTS OF OVEREXPOSURE:
The estimated acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4-hour inhalation (rat) LC50 values for this material are >5,000 mg/kg, >2,000 mg/kg and >20 mg/L, respectively.
Direct contact with this material may cause mild eye and skin irritation.

4. FIRST AID MEASURES

If swallowed, call a physician immediately. ONLY induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person.
In case of skin contact, wash affected areas of skin with soap and water.
In case of eye contact, immediately irrigate with plenty of water for 15 minutes.
Material is not expected to be harmful if inhaled. If inhaled, remove to fresh air.

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5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 175 F; 79 C
METHOD: Pensky-Martens Closed Cup

FLAMMABLE LIMITS
(% BY VOL): Not available

AUTOIGNITION TEMP: Not available

DECOMPOSITION TEMP: Not available

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective. Use water to keep containers cool. Wear self-contained, positive pressure breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove sources of ignition.
Where exposure level is not known, wear NIOSH approved, positive pressure, self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impervious boots. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush area with water.

7. HANDLING AND STORAGE

Keep away from heat and flame. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.
Areas containing this material should have fire-safe practices and electrical equipment in accordance with Electrical and Fire Protection Codes (NFPA-30) governing Class III A Combustible Liquids and OSHA Instruction STD 1-5.14A and state and local requirements.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

Engineering controls are not usually necessary if good hygiene practices are followed. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. Avoid unnecessary skin contact. Impervious gloves and apron are recommended to prevent skin contact. For operations where eye or face contact can occur, wear eye protection such as chemical splash-proof goggles or face shield. For operations where inhalation exposure can occur, a NIOSH approved respirator recommended by an industrial hygienist may be necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Dark brown viscous liquid with a mild organic odor.

BOILING POINT: >212 F; 100 C

MELTING POINT: Not available

VAPOR PRESSURE: Not available

SPECIFIC GRAVITY: 0.93 @ 25 C

VAPOR DENSITY: Not available

% VOLATILE (BY WT): Not available

pH: Not available

SATURATION IN AIR (% BY VOL): Not available

EVAPORATION RATE: Not available

SOLUBILITY IN WATER: Negligible

VOLATILE ORGANIC CONTENT: Not available

10. STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known

POLYMERIZATION: Will Not Occur
CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Strong acids and strong alkalines.

HAZARDOUS DECOMPOSITION PRODUCTS: carbon monoxide; carbon dioxide; and/or; oxides of sulfur (includes sulfur di and tri oxides)

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION. Toxicological information on the OSHA regulated components of this product is as follows:
This product contains no OSHA regulated (hazardous) components.

12. ECOLOGICAL INFORMATION

No aquatic LC50, BOD, or COD data available.

OCTANOL/H_2O PARTITION COEF.: Not available

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the Cytec product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 5 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. Cytec encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. Cytec recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. Cytec has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

	D.O.T. SHIPPING INFORMATION	IMO SHIPPING INFORMATION
SHIPPING NAME:	COMBUSTIBLE LIQUID, N.O.S.	NOT APPLICABLE/NOT REGULATED
HAZARD CLASS/ PACKING GROUP:	COMBUSTIBLE LIQUID - PG III	Not Applicable
UN NUMBER:	NA1993	Not Applicable
IMDG PAGE:	Not Applicable	Not Applicable
D.O.T. HAZARDOUS SUBSTANCES:	(PRODUCT REPORTABLE QUANTITY) Not Applicable	Not Applicable
TRANSPORT LABEL REQUIRED:	None	None Required

	ICAO/IATA	TRANSPORT CANADA
SHIPPING NAME:	NOT APPLICABLE/NOT REGULATED	NOT APPLICABLE/NOT REGULATED
HAZARD CLASS:	Not Applicable	Not Applicable
SUBSIDIARY CLASS:	Not Applicable	Not Applicable
UN / ID NUMBER:	Not Applicable	Not Applicable
PACKING GROUP:	Not Applicable	Not Applicable
TRANSPORT LABEL REQUIRED:	None Required	None Required
PACKING INSTR:	PASSENGER Not Applicable CARGO Not Applicable	Not Applicable
MAX NET QTY:	PASSENGER Not Applicable CARGO Not Applicable	Not Applicable

ADDITIONAL TRANSPORT INFORMATION

TECHNICAL NAME (N.O.S.): (Contains ethanol)

15. REGULATORY INFORMATION

INVENTORY INFORMATION

US TSCA: All components of this product are included on the TSCA Inventory in compliance with the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq.

CANADA DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.

EEC EINECS: All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) in compliance with Council Directive 67/548/EEC and its amendments.

OTHER ENVIRONMENTAL INFORMATION The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

COMPONENT	CAS. NO.	%	TPQ(lbs)	RQ(lbs)	S313	TSCA 12B
This product does not contain any components regulated under these sections of the EPA						

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA				
ACUTE (N)	CHRONIC (N)	FIRE (Y)	REACTIVE (N)	PRESSURE (N)

16. OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association)

Fire 2	FIRE: Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
Health 1 0 Reactivity —	HEALTH: Materials that, under emergency conditions, can cause significant irritation.
Special	REACTIVITY: Materials that in themselves are normally stable, even under fire exposure conditions.

REASON FOR ISSUE:

Product Name Changed

Randy Deskin, Ph.D., DABT

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation and verification. Before using any product, read its label.

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Appendix II-I

PARAMETER LISTING FOR STUDY

West Virginia Coal Slurry Study

June 21 2007

Water Sample Parameter List

Organic Parameters

Volatile Organic Compounds** - Method 8260 (GC/MS)
SemiVolatile Organic Compounds** - Method 8270 (GC/MS)
TPH (Total Petroleum Hydrocarbons) - DRO (Diesel Range Organics)
TPH - ORO (Oil Range Organics)
Ethylene Gylcol
Phenols (GC/MS)
Monoacrylamide - Method 8032

Inorganic Parameters

Aluminum (Total & Dissolved)
Antimony (Total & Dissolved)
Arsenic (Total & Dissolved)
Barium (Total & Dissolved)
Beryllium (Total & Dissolved)
Cadmium (Total & Dissolved)
Calcium (Total & Dissolved)
Chromium (Total & Dissolved)
Cobalt (Total & Dissolved)
Copper (Total & Dissolved)
Iron (Total & Dissolved)
Lead (Total & Dissolved)
Magnesium (Total & Dissolved)
Manganese (Total & Dissolved)
Mercury (Total & Dissolved)
Molybdenum (Total & Dissolved)
Nickel (Total & Dissolved)
Potassium (Total & Dissolved)
Selenium (Total & Dissolved)
Sodium (Total & Dissolved)
Silver (Total & Dissolved)
Silicon (Total & Dissolved)
Strontium (Total & Dissolved)
Vanadium (Total & Dissolved)
Thallium (Total & Dissolved)
Zinc (Total & Dissolved)
Cyanide
Total Suspended Solids
PH (Units)
Dissolved Solids
Specific Conductance
Alkalinity (CAC03)
Acidity
Chlorides
Ammonia
Nitrate
Nitrite
Fluoride
Sulfate

Metal Analyses - EPA Method 200.7/ 200.8
All other inorganic parameters EPA approved methods Standard Methods for Examination of Water and Wastewater

Solid Sample Parameter List - Coal Slurry*

Organic Parameters

Volatile Organic Compounds** - Method 8260 (GC/MS)
SemiVolatile Organic Compounds** - Method 8270 (GC/MS)
TPH (Total Petroleum Hydrocarbons) - DRO (Diesel Range Organics)
TPH - ORO (Oil Range Organics)
Ethylene Gylcol
Phenols (GC/MS)

Other Tests

Total Composition of Material - acid digestion of solid using EPA Method 3050B (once solid material is digested, all inorganic parameters listed on water sample parameter list should be analysed for)

* Coal Slurry should be handled as 2 separate analyses; the supernate should be separated from the solid and analysed separately
** Compounds are listed on attached pages

TABLE 2-20
METHOD 8260 (GC/MS)- VOLATILE ORGANIC COMPOUNDS

Acetone
Acetonitrile
Acrolein (Propenal)
Acrylonitrile
Allyl alcohol
Allyl chloride
Benzene
Benzyl chloride
Bis(2-chloroethyl)-sulfide
Bromoacetone
Bromobenzene
Bromochloromethane
Bromodichloromethane
4-Bromofluorobenzene
Bromoform
Bromomethane
n-Butanol
2-Butanone (MEK)
t-Butyl alcohol
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene
Carbon disulfide
Carbon tetrachloride
Chloral hydrate
Chloroacetonitrile
Chlorobenzene
1-Chlorobutane
Chlorodibromomethane
Chloroethane
2-Chloroethanol
2-Chloroethyl vinyl ether
Chloroform
1-Chlorohexane
Chloromethane
Chloroprene
3-Chloropropionitrile
2-Chlorotoluene
4-Chlorotoluene
Crotonaldehyde
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane
Dibromofluoromethane
Dibromomethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
cis-1,4-Dichloro-2-butene
trans-1,4-Dichloro-2-butene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
cis-1,2-Dichloroethene
trans-1,2-Dichloro-ethene
1,2-Dichloropropane
1,3-Dichloropropane
2,2-Dichloropropane
1,3-Dichloro-2-propanol
1,1-Dichloropropene
cis-1,3-Dichloropropene
trans-1,3-Dichloro-propene
1,2,3,4-Diepoxybutane
Diethyl ether
1,4-Difluorobenzene
1,4-Dioxane
Epichlorohydrin
Ethanol
Ethyl acetate
Ethylbenzene
Ethylene oxide
Ethyl methacrylate
Fluorobenzene
Hexachlorobutadiene
Hexachloroethane
2-Hexanone
2-Hydroxypropionitrile
Iodomethane
Isobutyl alcohol
Isopropylbenzene
p-Isopropyltoluene
Malononitrile
Methacrylonitrile
Methanol
Methyl-t-butyl ether
Methylene chloride
Methyl acrylate
Methyl methacrylate
4-Methyl-2-pentanone (MIBK)
Naphthalene
Nitrobenzene
2-Nitropropane
N-Nitroso-di-n-butylamine
Paraldehyde
Pentachloroethane
Pentafluorobenzene
2-Pentanone
2-Picoline
1-Propanol
2-Propanol
Propargyl alcohol
ß-Propiolactone
Propionitrile (Ethyl cyanide)
n-Propylamine
n-Propylbenzene
Pyridine
Styrene
1,1,1,2-Tetrachloro-ethane
1,1,2,2-Tetrachloro-ethane
Tetrachloroethene
Toluene
o-Toluidine
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
1,2,3-Trichloropropane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
Vinyl acetate
Vinyl chloride
o-Xylene
m-Xylene
p-Xylene

TABLE 2-21
METHOD 8270 (GC/MS) - SEMIVOLATILE ORGANIC COMPOUNDS

Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene
1-Acetyl-2-thiourea
Aldrin
2-Aminoanthraquinone
Aminoazobenzene
4-Aminobiphenyl
3-Amino-9-ethyl-carbazole
Anilazine
Aniline
o-Anisidine
Anthracene
Aramite
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Azinphos-methyl
Barban
Benz(a)anthracene
Benzidine
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzoic acid
Benzo(g,h,i)perylene
Benzo(a)pyrene
p-Benzoquinone
Benzyl alcohol
α-BHC
β-BHC
δ-BHC
γ-BHC (Lindane)
Bis(2-chloroethoxy)-methane
Bis(2-chloroethyl) ether
Bis(2-chloroisopropyl) ether
Bis(2-ethylhexyl) phthalate
4-Bromophenyl phenyl ether
Bromoxynil
Butyl benzyl phthalate
Captafol
Captan
Carbaryl
Carbofuran
Carbophenothion
Chlordane (NOS)
Chlorfenvinphos
4-Chloroaniline
Chlorobenzilate
5-Chloro-2-methyl-aniline
4-Chloro-3-methylphenol
3-(Chloromethyl)-pyridine hydro-chloride
1-Chloronaphthalene
2-Chloronaphthalene
2-Chlorophenol
4-Chloro-1,2-phenylene-diamine
4-Chloro-1,3-phenylene-diamine
4-Chlorophenyl phenyl ether
Chrysene
Coumaphos
p-Cresidine
Crotoxyphos
2-Cyclohexyl-4,6-dinitrophenol
4,4'-DDD
4,4'-DDE
4,4'-DDT
Demeton-O
Demeton-S
Diallate (cis or trans)
2,4-Diaminotoluene
Dibenz(a,j)acridine
Dibenz(a,h)anthracene
Dibenzofuran
Dibenzo(a,e)pyrene
1,2-Dibromo-3-chloropropane
Di-n-butyl phthalate
Dichlone
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Dichlorovos
Dicrotophos
Dieldrin
Diethyl phthalate
Diethylstilbestrol
Diethyl sulfate
Dihydrosaffrole
Dimethoate
3,3'-Dimethoxybenzidine
Dimethylaminoazobenzene
7,12-Dimethylbenz(a)-anthracene
3,3'-Dimethylbenzidine
α,α-Dimethylphenethyl-amine
2,4-Dimethylphenol
Dimethyl phthalate
1,2-Dinitrobenzene
1,3-Dinitrobenzene
1,4-Dinitrobenzene
4,6-Dinitro-2-methyl-phenol
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Dinocap
Dinoseb
Dioxathion
Diphenylamine
5,5-Diphenylhydantoin
1,2-Diphenylhydrazine
Di-n-octyl phthalate
Disulfoton
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Endrin ketone
EPN
Ethion
Ethyl carbamate
Ethyl methanesulfonate

TABLE 2-21 (CONTINUED)

Famphur
Fensulfothion
Fenthion
Fluchloralin
Fluoranthene
Fluorene
2-Fluorobiphenyl
2-Fluorophenol
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclo-
pentadiene
Hexachloroethane
Hexachlorophene
Hexachloropropene
Hexamethylphosphoramide
Hydroquinone
Indeno(1,2,3-cd)pyrene
Isodrin
Isophorone
Isosafrole
Kepone
Leptophos
Malathion
Maleic anhydride
Mestranol
Methapyrilene
Methoxychlor
3-Methylcholanthrene
4,4'-Methylenebis-
(2-chloroaniline)
4,4'-Methylenebis-
(N,N-dimethylaniline)
Methyl methanesulfonate
2-Methylnaphthalene
Methyl parathion
2-Methylphenol
3-Methylphenol
4-Methylphenol
Mevinphos
Mexacarbate
Mirex
Monocrotophos
Naled
Naphthalene
1,4-Naphthoquinone
1-Naphthylamine
2-Naphthylamine
Nicotine
5-Nitroacenaphthene
2-Nitroaniline
3-Nitroaniline
4-Nitroaniline
5-Nitro-o-anisidine
Nitrobenzene
4-Nitrobiphenyl
Nitrofen
2-Nitrophenol
4-Nitrophenol
Nitroquinoline-1-oxide
N-Nitrosodi-n-
butylamine
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
N-Nitrosodi-n-propyl-
amine
N-Nitrosomethylethyl-
amine
N-Nitrosomorpholine
N-Nitrosopiperidine
N-Nitrosopyrrolidine
5-Nitro-o-toluidine
Octamethyl pyrophos-
phoramide
4,4'-Oxydianiline
Parathion
Pentachlorobenzene
Pentachloronitrobenzene
Pentachlorophenol
Phenacetin
Phenanthrene
Phenobarbital
Phenol
1,4-Phenylenediamine
Phorate
Phosalone
Phosmet
Phosphamidion
Phthalic anhydride
2-Picoline
Piperonyl sulfoxide
Pronamide
Propylthiouracil
Pyrene
Pyridine
Resorcinol
Safrole
Strychnine
Sulfallate
Terbufos
1,2,4,5-Tetrachloro
benzene
2,3,4,6-Tetrachloro-
phenol
Tetrachlorvinphos
Tetraethyl dithio-
pyrophosphate
Tetraethyl
pyrophosphate
Thionazine
Thiophenol
(Benzenethiol)
Toluene diisocyanate
o-Toluidine
Toxaphene
2,4,6-Tribromophenol
1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
O,O,O-Triethyl
phosphorothioate
Trifluralin
2,4,5-Trimethylaniline
Trimethyl phosphate
1,3,5-Trinitrobenzene
Tris(2,3-dibromopropyl)
phosphate
Tri-p-tolyl phosphate

Information used to develop the parameter list for sampling of coal slurry and water.

- Numerous conversations with analytical chemists and regulatory authorities from Virginia, Pennsylvania and Ohio.
- USGS Report – Scientific Investigations Report 2006-5059 [Ground-Water Quality in Unmined Areas and Near Reclaimed Surface Coal Mines PA and WV
- Various Presentations from Underground Slurry Injection Workshop –
- US Department of Health and Human Services – Health Consultation – Martin County Coal Slurry Release (August 7, 2006)
-Report of the Black Water Task Force (April 2005)
- Report and website of Sludge Safety Project and OVEC
- EPA Report on Raw Wastewater from Prep Plants – Table outlining potential compounds and detected concentrations from various prep plants tested. (Ken Polick gave me excerpts from the publication).

Appendix II-J

SUMMARIES OF APPROVED TEST METHODS USED BY REIC

National Environmental Methods Index

Printer-Friendly View

Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	9056A
Revision Information	Revision 1, November 2000
Method Name	**Descriptive Name:** Anion Chromatography Method **Official Name:** Determination Of Inorgainic Anions By Ion Chromatography
Media	**Media:** VARIOUS
Subcategory	Inorganic
Citation	**SW-846 Update IVB**
Method Download	**Download full method now (PDF file)**
Summary of Method	A small volume (2-3 mL) of sample is injected into an ion chromatograph to flush and fill a constant volume sample loop. The sample is then injected into a stream of carbonate-bicarbonate eluent of the same strength as the sample. The samples are passed through three ion exchange columns (with different functionalities), and compounds are identified by retention time, and quantitated by peak height or area (by comparison with a standard calibration curve).
Scope and Application	This method is applicable to the determination of chloride, fluoride, bromide, nitrate, phosphate, and sulfate in the collection solutions from the bomb combustion of solid waste samples, as well as all water samples.
Applicable Concentration Range	0.2 - 100mg/L. Ranges differ for each analyte. This range is taken from the lowest and highest limit of the analytes listed in the method.
Interferences	
QC Requirements	Mid-range calibration standard every 10 injections; sample duplicate (1 in every 10 samples), MS
Sample Handling	Collect the samples using a sampling plan that addresses the considerations discussed in

	Chapter 9 of this manual. Preserve the samples by refrigeration at 4 degrees C. Analyze the samples as soon as possible after collection.
Max Holding Time	ASAP
Relative Cost/Effort	$51 to $200
Sample Prep Method(s)	

Method *Anion Chromatography Method* has 7 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Phosphate (14265-44-2)	.1 mg/L	N/A	N/A	
Nitrate (14797-55-8)	.1 mg/L	N/A	N/A	
Nitrite (14797-65-0)	.1 mg/L	N/A	N/A	
Sulfate (14808-79-8)	.1 mg/L	N/A	N/A	
Chloride (16887-00-6)	.1 mg/L	N/A	N/A	
Fluoride (16984-48-8)	.05 mg/L	N/A	N/A	
Bromide (24959-67-9)	.1 mg/L	N/A	N/A	

export_analytes

Precision Descriptor Notes	-
Detection Level Note	Value corresponds to MDL determined per 40 CFR part 136, Appendix B.

Close Window

National Environmental Methods Index

Printer-Friendly View

Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8015C
Revision Information	Revision 3, Feb. 2007
Method Name	**Descriptive Name:** Nonhalogenated Organics by GC-FID **Official Name:** Nonhalogenated Organics Using GC/FID
Media	**Media:** VARIOUS
Subcategory	Organic
Citation	**SW-846 Update IVB**
Method Download	**Download full method now (PDF file)**
Summary of Method	Depending on the analytes of interest, samples are introduced into the GC by a variety of techniques, including: purge-and-trap, direct injection of aqueous samples, injection of the concentrate from azeotropic distillation, vacuum distillation, or following solvent extraction. Analytes are detected by a flame ionization detector.
Scope and Application	This method determines the concentration of various nonhalogenated volatile and semivolatile organic compounds in surface water, ground water, and solid matrices. In addition, gasoline range organics and diesel range organics may also be analyzed by this method.
Applicable Concentration Range	Not Available.
Interferences	(A) Contamination: Sample contamination may occur by diffusion of volatile organics through the septum seal during shipment and storage. The analysis of trip blanks will identify this problem. (B) Matrix interferences: Since the FID is non-selective, there is a potential for the interference of non-target compounds. (C) Memory Interferences: Carryover may occur whenever high and low concentration samples are analyzed in sequence. Rinse the sample syringe or purging device between samples. Also, unusually concentrated samples should be followed by injection of a solvent blank.

QC Requirements	Refer to Chapter One and Methods 8000, 3500, and 5000 for specific QC procedures. Procedures include: validation of sample preparation, introduction, and analysis, initial demonstration of proficiency, calibration verification, evaluation of retention times, analysis of method blanks, matrix spikes, duplicates, surrogates and laboratory control samples.
Sample Handling	See See the introductory material to SW-846 Chapter Four, "Organic Analytes," and Method 5035 for information. If the headspace technique is used, also see Method 5021.
Max Holding Time	See SW-846 Chapter Four for information
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	See Method 5000

Method *Nonhalogenated Organics by GC-FID* has 32 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Acrolein (107-02-8)	15 ug/L	146 % Rec (SL)	13 % RSD (SL)	25 ug/L
Ethyl cyanide (107-12-0)	6 ug/L	135 % Rec (SL)	5 % RSD (SL)	25 ug/L
Acrylonitrile (107-13-1)	9 ug/L	179 % Rec (SL)	7 % RSD (SL)	25 ug/L
Allyl alcohol (107-18-6)	N/A	N/A	N/A	
Ethylene glycol (107-21-1)	N/A	N/A	N/A	
Methyl n-propyl ketone (107-87-9)	2 ug/L	94 % Rec (SL)	3 % RSD (SL)	25 ug/L
4-Methyl-2-pentanone (108-10-1)	2 ug/L	66 % Rec (SL)	4 % RSD (SL)	25 ug/L
alpha-Picoline (109-06-8)	N/A	N/A	N/A	
Pyridine (110-86-1)	9 ug/L	92 % Rec (SL)	12 % RSD (SL)	25 ug/L

Paraldehyde (123-63-7)	N/A	N/A	N/A	
(E)-Crotonaldehyde (123-73-9)	N/A	N/A	N/A	
p-Dioxane (123-91-1)	15 ug/L	124 % Rec (SL)	16 % RSD (SL)	25 ug/L
Ethyl acetate (141-78-6)	8 ug/L	142 % Rec (SL)	7 % RSD (SL)	25 ug/L
Crotonaldehyde (4170-30-3)	N/A	N/A	N/A	
p,p'-DDT (50-29-3)	N/A	N/A	N/A	
Diethyl ether (60-29-7)	N/A	N/A	N/A	
Ethanol (64-17-5)	12 ug/L	152 % Rec (SL)	10 % RSD (SL)	25 ug/L
Methanol (67-56-1)	21 ug/L	166 % Rec (SL)	14 % RSD (SL)	25 ug/L
Isopropanol (67-63-0)	17 ug/L	167 % Rec (SL)	13 % RSD (SL)	25 ug/L
Acetone (67-64-1)	16 ug/L	126 % Rec (SL)	17 % RSD (SL)	25 ug/L
n-Propyl alcohol (71-23-8)	7 ug/L	N/A	N/A	25 ug/L
n-Butyl alcohol (71-36-3)	8 ug/L	127 % Rec (SL)	8 % RSD (SL)	25 ug/L
Acetonitrile (75-05-8)	6 ug/L	147 % Rec (SL)	5 % RSD (SL)	25 ug/L
Ethylene oxide (75-21-8)	9 ug/L	114 % Rec (SL)	10 % RSD (SL)	25 ug/L
Tert-Butyl Alcohol (75-65-0)	7 ug/L	122 % Rec (SL)	7 % RSD (SL)	25 ug/L
Isobutyl alcohol	8 ug/L	122 % Rec (SL)	8 % RSD (SL)	25 ug/L

(78-83-1)				
Methyl ethyl ketone (78-93-3)	5 ug/L	105 % Rec (SL)	6 % RSD (SL)	25 ug/L
Hexafluoro-2-propanol (I.S.) (920-66-1)	N/A	N/A	N/A	
N-Nitrosodi-n-butylamine (924-16-3)	N/A	N/A	N/A	
o-Toluidine (95-53-4)	N/A	N/A	N/A	
2-Chloroacrylonitrile (920-37-6)	N/A	N/A	N/A	
Hexafluoro-2-methyl-2-propanol (I.S.) (515-14-6)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	Example method performance data for non-purgeable volatiles in groundwater by azeotropic microdistillation (method 5031) are shown as examples and guidance. Performance data and related information are provided in SW-846 methods only as examples and guidance. The data do not represent required performance criteria for users of the methods. Instead, performance criteria should be developed on a project-specific basis, and the laboratory should establish in-house QC performance criteria for the application of this method.
Detection Level Note	-

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8270D
Revision Information	Revision 4.0, January 1998
Method Name	**Descriptive Name:** Semivolatile Organic Compounds by GC/MS **Official Name:** Semivolatile Organic Compounds by GC/MS
Media	**Media:** VARIOUS
Subcategory	Organic
Citation	**SW-846 Update IVA**
Method Download	**Download full method now (PDF file)**
Summary of Method	The samples are prepared for analysis by gas chromatography/mass spectrometry (GC/MS) using the appropriate sample preparation (refer to Method 3500) and, if necessary, sample cleanup procedures (refer to Method 3600). The semivolatile compounds are introduced into the GC/MS by injecting the sample extract into a gas chromatograph (GC) with a narrow-bore fused-silica capillary column. The GC column is temperature-programmed to separate the analytes, which are then detected with a mass spectrometer (MS) connected to the gas chromatograph. Analytes eluted from the capillary column are introduced into the mass spectrometer via a jet separator or a direct connection. Identification of target analytes is accomplished by comparing their mass spectra with the electron impact (or electron impact-like) spectra of authentic standards. Quantitation is accomplished by comparing the response of a major (quantitation) ion relative to an internal standard using a five-point calibration curve. NOTE: This method can be used in conjunction with the following sample preparation procedures: Air (particulates and sorbent resin)- Method 3542 Water (including TCLP leachates) - Methods 3510, 3520, 3535 Soil/sediment - Methods 3540, 3541, 3545, 3546 3550, 3560, 3561 Waste - Methods 3540, 3541, 3545, 3546, 3550, 3560, 3561, 3580
Scope and Application	Method 8270 is used to determine the concentration of semivolatile organic compounds in extracts prepared from many types of solid waste matrices, soils, air sampling media and water samples. Direct injection of a sample may be used in limited applications.

Applicable Concentration Range	None given.
Interferences	(1) Contaminants from glassware. (2) Matrix interferences that are co-extracted with sample. (3) Contamination by carryover can occur whenever high-concentration and low-concentration samples are sequentially analyzed. To reduce carryover, the sample syringe must be rinsed with solvent between sample injections. Whenever an unusually concentrated sample is encountered, it should be followed by the analysis of solvent to check for cross-contamination.
QC Requirements	See SW-846 Method 8000 and 3500. Procedures include: validation of sample preparation, introduction, and analysis, initial demonstration of proficiency, calibration verification, evaluation of retention times, analysis of method blanks, matrix spikes, duplicates, surrogates, and laboratory control samples.
Sample Handling	Store the extract at 4 degrees C, protected from light in screw-cap vials equipped with unpierced Teflon lined septa. See SW-846, Chapter 4, Organic Analytes, Section 4.1. See SW-846 Chapter Four for information.
Max Holding Time	Aqueous samples - 7 days (sample), 40 days (extract). Solid samples - 14 days (sample), 40 (extract). Also, see SW-846 Chapter Four for information.
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	See Method Summary

Method *Semivolatile Organic Compounds by GC/MS* has 242 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
p-Nitroaniline (100-01-6)	20 ug/L	N/A	N/A	
4-Nitrophenol (100-02-7)	10 ug/L	58.56 % Rec (ML)	50.48 % RSD (ML)	50 ug/L
1,4-Dinitrobenzene (100-25-4)	40 ug/L	N/A	N/A	
Benzyl alcohol (100-51-6)	20 ug/L	N/A	N/A	
N-Nitrosopiperidine (100-75-4)	20 ug/L	N/A	N/A	
Anilazine (101-05-3)	100 ug/L	N/A	N/A	

4,4'-Methylenebis(2-chloroaniline) (101-14-4)	N/A	N/A	N/A	
Barban (101-27-9)	200 ug/L	N/A	N/A	
4-Bromophenyl phenyl ether (101-55-3)	10 ug/L	88.32 % Rec (ML)	17.32 % RSD (ML)	50 ug/L
4,4'-Methylenebis(N,N-dimethyl) benzenamine (101-61-1)	N/A	N/A	N/A	
4,4'-Oxydianiline (101-80-4)	20 ug/L	N/A	N/A	
Heptachlor epoxide (1024-57-3)	N/A	88.26 % Rec (ML)	29.28 % RSD (ML)	50 ug/L
Endosulfan sulfate (1031-07-8)	N/A	41.05 % Rec (ML)	57.85 % RSD (ML)	20 ug/L
2,4-Dimethylphenol (105-67-9)	10 ug/L	79.82 % Rec (ML)	24.62 % RSD (ML)	50 ug/L
N-Nitrosomethylethylamine (10595-95-6)	N/A	N/A	N/A	
p-Cresol (106-44-5)	N/A	N/A	N/A	
1,4-Dichlorobenzene (106-46-7)	10 ug/L	70.06 % Rec (ML)	29.72 % RSD (ML)	50 ug/L
p-Chloroaniline (106-47-8)	20 ug/L	N/A	N/A	
p-Phenylenediamine (106-50-3)	N/A	N/A	N/A	
p-Benzoquinone (106-51-4)	10 ug/L	N/A	N/A	
Tetraethyl pyrophosphate (107-49-3)	40 ug/L	N/A	N/A	
Maleic anhydride (108-31-6)	N/A	N/A	N/A	

m-Cresol (108-39-4)	N/A	N/A	N/A	
Resorcinol (108-46-3)	100 ug/L	N/A	N/A	
bis(2-Chloroisopropyl) ether (108-60-1)	10 ug/L	98.38 % Rec (ML)	27.08 % RSD (ML)	50 ug/L
Phenol (108-95-2)	10 ug/L	45.52 % Rec (ML)	36.16 % RSD (ML)	50 ug/L
Benzenethiol (108-98-5)	N/A	N/A	N/A	
alpha-Picoline (109-06-8)	N/A	N/A	N/A	
Pyridine (110-86-1)	N/A	N/A	N/A	
PCB-1260 (11096-82-5)	N/A	59.28 % Rec (ML)	46.64 % RSD (ML)	50 ug/L
PCB-1254 (11097-69-1)	N/A	N/A	N/A	
PCB-1221 (11104-28-2)	N/A	N/A	N/A	
PCB-1232 (11141-16-5)	N/A	N/A	N/A	
bis(2-Chloroethyl) ether (111-44-4)	10 ug/L	82.92 % Rec (ML)	35.2 % RSD (ML)	50 ug/L
bis(2-Chloroethoxy)methane (111-91-1)	10 ug/L	101.92 % Rec (ML)	30.02 % RSD (ML)	50 ug/L
Fensulfothion (115-90-2)	40 ug/L	N/A	N/A	
2-Aminoanthraquinone (117-79-3)	20 ug/L	N/A	N/A	
Dichlone (117-80-6)	N/A	N/A	N/A	
bis(2-Ethylhexyl) phthalate	N/A	81.64 % Rec	37.34 % RSD	50 ug/L

(117-81-7)		(ML)	(ML)	
Di-n-octyl phthalate (117-84-0)	10 ug/L	74.42 % Rec (ML)	39.38 % RSD (ML)	50 ug/L
Hexachlorobenzene (118-74-1)	10 ug/L	75.32 % Rec (ML)	41.96 % RSD (ML)	50 ug/L
3,3'-Dimethoxybenzidine (119-90-4)	100 ug/L	N/A	N/A	
o-Tolidine (119-93-7)	N/A	N/A	N/A	
Anthracene (120-12-7)	N/A	81.36 % Rec (ML)	25.72 % RSD (ML)	50 ug/L
Isosafrole (120-58-1)	10 ug/L	N/A	N/A	
Piperonyl sulfoxide (120-62-7)	100 ug/L	N/A	N/A	
p-Cresidine (120-71-8)	10 ug/L	N/A	N/A	
1,2,4-Trichlorobenzene (120-82-1)	10 ug/L	92.42 % Rec (ML)	21.78 % RSD (ML)	50 ug/L
2,4-Dichlorophenol (120-83-2)	10 ug/L	87.26 % Rec (ML)	23.56 % RSD (ML)	50 ug/L
2,4-Dinitrotoluene (121-14-2)	10 ug/L	82.38 % Rec (ML)	24 % RSD (ML)	50 ug/L
Malathion (121-75-5)	50 ug/L	N/A	N/A	
Phentermine (122-09-8)	N/A	N/A	N/A	
Diphenylamine (122-39-4)	N/A	N/A	N/A	
1,2-Diphenylhydrazine (122-66-7)	N/A	N/A	N/A	
Hydroquinone (123-31-9)	N/A	N/A	N/A	

O,O,O-Triethylphosphorothioate (126-68-1)	N/A	N/A	N/A	
PCB-1248 (12672-29-6)	N/A	N/A	N/A	
Tris(2,3-dibromopropyl)phosphate (126-72-7)	200 ug/L	N/A	N/A	
PCB-1016 (12674-11-2)	N/A	N/A	N/A	
Demeton-S (126-75-0)	10 ug/L	N/A	N/A	
Pyrene (129-00-0)	10 ug/L	83.68 % Rec (ML)	15.62 % RSD (ML)	50 ug/L
1,4-Naphthoquinone (130-15-4)	10 ug/L	N/A	N/A	
Terbufos (13071-79-9)	20 ug/L	N/A	N/A	
Dimethyl phthalate (131-11-3)	10 ug/L	30.3 % Rec (ML)	95.8 % RSD (ML)	10 ug/L
Phosphamidon (13171-21-6)	100 ug/L	N/A	N/A	
Dinex (131-89-5)	N/A	N/A	N/A	
3-Amino-9-ethyl carbazole (132-32-1)	N/A	N/A	N/A	
Dibenzofuran (132-64-9)	10 ug/L	N/A	N/A	
Captan (133-06-2)	50 ug/L	N/A	N/A	
alpha-Naphthylamine (134-32-7)	N/A	N/A	N/A	
2,4,5-Trimethylaniline (137-17-7)	10 ug/L	N/A	N/A	
Aramite	20 ug/L	N/A	N/A	

(140-57-8)				
Dicrotophos (141-66-2)	10 ug/L	N/A	N/A	
Kepone (143-50-0)	20 ug/L	N/A	N/A	
Octamethylpyrophosphoramide (152-16-9)	200 ug/L	N/A	N/A	
Carbofuran (1563-66-2)	10 ug/L	N/A	N/A	
Trifluralin (1582-09-8)	10 ug/L	N/A	N/A	
Bromoxynil (1689-84-5)	10 ug/L	N/A	N/A	
Nitrofen (1836-75-5)	20 ug/L	N/A	N/A	
Hexachloropropene (1888-71-7)	10 ug/L	N/A	N/A	
Benzo(g,h,i)perylene (191-24-2)	10 ug/L	96.28 % Rec (ML)	50.12 % RSD (ML)	50 ug/L
Dibenzo(a,e)pyrene (192-65-4)	10 ug/L	N/A	N/A	
Indeno(1,2,3-cd)pyrene (193-39-5)	10 ug/L	71.8 % Rec (ML)	50.88 % RSD (ML)	50 ug/L
Benzo(b)fluoranthene (205-99-2)	10 ug/L	89.4 % Rec (ML)	30.92 % RSD (ML)	50 ug/L
Fluoranthene (206-44-0)	10 ug/L	83.2 % Rec (ML)	26.8 % RSD (ML)	50 ug/L
Benzo(k)fluoranthene (207-08-9)	10 ug/L	83.88 % Rec (ML)	35.8 % RSD (ML)	50 ug/L
Acenaphthylene (208-96-8)	10 ug/L	90.48 % Rec (ML)	24.92 % RSD (ML)	50 ug/L
EPN (2104-64-5)	10 ug/L	N/A	N/A	

Leptophos (21609-90-5)	10 ug/L	N/A	N/A	
Chrysene (218-01-9)	10 ug/L	91 % Rec (ML)	32.82 % RSD (ML)	50 ug/L
Tetrachlorvinphos (22248-79-9)	20 ug/L	N/A	N/A	
Dibenz(a,j)acridine (224-42-0)	10 ug/L	N/A	N/A	
Diallate (2303-16-4)	10 ug/L	N/A	N/A	
Phosalone (2310-17-0)	100 ug/L	N/A	N/A	
Mirex (2385-85-5)	10 ug/L	N/A	N/A	
Pronamide (23950-58-5)	10 ug/L	N/A	N/A	
Zinophos (297-97-2)	N/A	N/A	N/A	
Methyl parathion (298-00-0)	10 ug/L	N/A	N/A	
Phorate (298-02-2)	10 ug/L	N/A	N/A	
Demeton-O (298-03-3)	10 ug/L	N/A	N/A	
Disulfoton (298-04-4)	10 ug/L	N/A	N/A	
Naled (300-76-5)	20 ug/L	N/A	N/A	
Aldrin (309-00-2)	N/A	81.32 % Rec (ML)	45.26 % RSD (ML)	50 ug/L
Mexacarbate (315-18-4)	20 ug/L	N/A	N/A	
alpha-BHC	N/A	N/A	N/A	

(319-84-6)				
beta-BHC (319-85-7)	N/A	85.12 % Rec (ML)	26.12 % RSD (ML)	50 ug/L
delta-BHC (319-86-8)	N/A	26.82 % Rec (ML)	92.66 % RSD (ML)	50 ug/L
Endosulfan-II (33213-65-9)	N/A	N/A	N/A	
Fluchloralin (33245-39-5)	20 ug/L	N/A	N/A	
Sulfotepp (3689-24-5)	N/A	N/A	N/A	
Dinocap (39300-45-3)	100 ug/L	N/A	N/A	
Isodrin (465-73-6)	20 ug/L	N/A	N/A	
Chlorfenvinphos (470-90-6)	20 ug/L	N/A	N/A	
Phenobarbitol (50-06-6)	10 ug/L	N/A	N/A	
p,p'-DDT (50-29-3)	N/A	72.44 % Rec (ML)	63.84 % RSD (ML)	50 ug/L
Benzo(a)pyrene (50-32-8)	N/A	89.74 % Rec (ML)	34.7 % RSD (ML)	50 ug/L
Chlorobenzilate (510-15-6)	10 ug/L	N/A	N/A	
Trimethylphosphate (512-56-1)	10 ug/L	N/A	N/A	
2,4-Dinitrophenol (51-28-5)	50 ug/L	44.92 % Rec (ML)	94.58 % RSD (ML)	50 ug/L
4-Chloro-m-phenylenediamine (5131-60-2)	N/A	N/A	N/A	
Propylthiouracil (51-52-5)	100 ug/L	N/A	N/A	

Urethane (51-79-6)	N/A	N/A	N/A	
1,2-Dinitrobenzene (528-29-0)	40 ug/L	N/A	N/A	
Famphur (52-85-7)	20 ug/L	N/A	N/A	
2-Methyl-4,6-dinitrophenol (534-52-1)	N/A	N/A	N/A	
PCB-1242 (53469-21-9)	N/A	N/A	N/A	
Endrin ketone (53494-70-5)	N/A	N/A	N/A	
Dibenzo(a,h)anthracene (53-70-3)	N/A	97.44 % Rec (ML)	59.5 % RSD (ML)	50 ug/L
HN-1 (538-07-8)	N/A	N/A	N/A	
Acetamidofluorene (53-96-3)	20 ug/L	N/A	N/A	
Nicotine (54-11-5)	20 ug/L	N/A	N/A	
1,3-Dichlorobenzene (541-73-1)	10 ug/L	84.6 % Rec (ML)	41.22 % RSD (ML)	50 ug/L
N-Nitrosodiethylamine (55-18-5)	20 ug/L	N/A	N/A	
Fenthion (55-38-9)	10 ug/L	N/A	N/A	
HN-3 (555-77-1)	N/A	N/A	N/A	
Ethion (563-12-2)	10 ug/L	N/A	N/A	
Ethyl parathion (56-38-2)	10 ug/L	N/A	N/A	
3-Methylcholanthrene	10 ug/L	N/A	N/A	

(56-49-5)				
Diethylstilbestrol (56-53-1)	20 ug/L	N/A	N/A	
Benzo(a)anthracene (56-55-3)	10 ug/L	86.8 % Rec (ML)	25.44 % RSD (ML)	50 ug/L
4-Nitroquinoline-1-oxide (56-57-5)	40 ug/L	N/A	N/A	
Coumaphos (56-72-4)	40 ug/L	N/A	N/A	
Strychnine (57-24-9)	40 ug/L	N/A	N/A	
Dilantin (57-41-0)	N/A	N/A	N/A	
Chlordane (57-74-9)	N/A	N/A	N/A	
7,12-Dimethylbenz(a)anthracene (57-97-6)	10 ug/L	N/A	N/A	
Toluene-2,4-diisocyanate (584-84-9)	N/A	N/A	N/A	
Lindane (58-89-9)	N/A	N/A	N/A	
2,3,4,6-Tetrachlorophenol (58-90-2)	10 ug/L	N/A	N/A	
1-Acetyl-2-thiourea (591-08-2)	1000 ug/L	N/A	N/A	
4-Chloro-3-methylphenol (59-50-7)	N/A	N/A	N/A	
N-Nitrosomorpholine (59-89-2)	N/A	N/A	N/A	
Aminoazobenzene (60-09-3)	10 ug/L	N/A	N/A	
p-Dimethylaminoazobenzene (60-11-7)	N/A	N/A	N/A	

5-Nitroacenaphthene (602-87-9)	10 ug/L	N/A	N/A	
Dimethoate (60-51-5)	20 ug/L	N/A	N/A	
Dieldrin (60-57-1)	N/A	81.68 % Rec (ML)	25.86 % RSD (ML)	50 ug/L
2,6-Dinitrotoluene (606-20-2)	10 ug/L	98.8 % Rec (ML)	19.7 % RSD (ML)	50 ug/L
Pentachlorobenzene (608-93-5)	10 ug/L	N/A	N/A	
N-Nitrosodi-n-propylamine (621-64-7)	N/A	99.56 % Rec (ML)	44.94 % RSD (ML)	50 ug/L
Phenacetin (62-44-2)	20 ug/L	N/A	N/A	
Ethyl methanesulfonate (62-50-0)	20 ug/L	N/A	N/A	
Aniline (62-53-3)	N/A	N/A	N/A	
Dichlorvos (62-73-7)	10 ug/L	N/A	N/A	
N-Nitrosodimethylamine (62-75-9)	N/A	N/A	N/A	
Carbaryl (63-25-2)	N/A	N/A	N/A	
Diethylsulfate (64-67-5)	100 ug/L	N/A	N/A	
Benzoic acid (65-85-0)	50 ug/L	N/A	N/A	
Methyl methanesulfonate (66-27-3)	10 ug/L	N/A	N/A	
Hexachloroethane (67-72-1)	10 ug/L	71.34 % Rec (ML)	18.6 % RSD (ML)	50 ug/L
Hexamethylphosphoramide	20 ug/L	N/A	N/A	

(680-31-9)				
Monocrotophos (6923-22-4)	40 ug/L	N/A	N/A	
Pyridine, 3-chloromethyl-, hydrochloride (6959-48-4)	N/A	N/A	N/A	
4-Chlorophenylphenyl ether (7005-72-3)	10 ug/L	92.06 % Rec (ML)	29.08 % RSD (ML)	50 ug/L
Hexachlorophene (70-30-4)	50 ug/L	N/A	N/A	
Endrin (72-20-8)	N/A	N/A	N/A	
Mestranol (72-33-3)	20 ug/L	N/A	N/A	
Methoxychlor (72-43-5)	N/A	N/A	N/A	
4,4'-DDD (72-54-8)	N/A	55.2 % Rec (ML)	64.08 % RSD (ML)	50 ug/L
4,4'-DDE (72-55-9)	N/A	68.92 % Rec (ML)	36.92 % RSD (ML)	50 ug/L
Phosmet (732-11-6)	40 ug/L	N/A	N/A	
Endrin aldehyde (7421-93-4)	N/A	68.28 % Rec (ML)	71.76 % RSD (ML)	50 ug/L
Heptachlor (76-44-8)	N/A	81.06 % Rec (ML)	49.54 % RSD (ML)	50 ug/L
Crotoxyphos (7700-17-6)	20 ug/L	N/A	N/A	
Hexachlorocyclopentadiene (77-47-4)	10 ug/L	N/A	N/A	
Mevinphos (7786-34-7)	10 ug/L	N/A	N/A	
Tri-p-tolyl phosphate (78-32-0)	10 ug/L	N/A	N/A	

Dioxathion (78-34-2)	N/A	N/A	N/A	
Isophorone (78-59-1)	10 ug/L	114.82 % Rec (ML)	33.52 % RSD (ML)	50 ug/L
Carbophenothion (786-19-6)	10 ug/L	N/A	N/A	
Toxaphene (8001-35-2)	N/A	N/A	N/A	
Pentachloronitrobenzene (82-68-8)	20 ug/L	N/A	N/A	
Acenaphthene (83-32-9)	10 ug/L	96.38 % Rec (ML)	19.66 % RSD (ML)	50 ug/L
Diethyl phthalate (84-66-2)	10 ug/L	45 % Rec (ML)	52.44 % RSD (ML)	50 ug/L
Di-n-butyl phthalate (84-74-2)	10 ug/L	60.42 % Rec (ML)	40.2 % RSD (ML)	50 ug/L
Phenanthrene (85-01-8)	10 ug/L	86.88 % Rec (ML)	15.5 % RSD (ML)	50 ug/L
Phthalic anhydride (85-44-9)	100 ug/L	N/A	N/A	
Butyl benzyl phthalate (85-68-7)	10 ug/L	62.64 % Rec (ML)	54.84 % RSD (ML)	50 ug/L
N-Nitrosodiphenylamine (86-30-6)	10 ug/L	N/A	N/A	
Azinphos-methyl (86-50-0)	100 ug/L	N/A	N/A	
Fluorene (86-73-7)	10 ug/L	90 % Rec (ML)	14.22 % RSD (ML)	50 ug/L
2,6-Dichlorophenol (87-65-0)	10 ug/L	N/A	N/A	
Hexachlorobutadiene (87-68-3)	10 ug/L	68.98 % Rec (ML)	26.98 % RSD (ML)	50 ug/L
Pentachlorophenol	50 ug/L	96.98 % Rec	38.66 % RSD	50 ug/L

(87-86-5)		(ML)	(ML)	
2,4,6-Trichlorophenol (88-06-2)	10 ug/L	90.64 % Rec (ML)	25.62 % RSD (ML)	50 ug/L
2-Nitroaniline (88-74-4)	50 ug/L	N/A	N/A	
2-Nitrophenol (88-75-5)	10 ug/L	104.7 % Rec (ML)	32.2 % RSD (ML)	50 ug/L
Dinoseb (88-85-7)	20 ug/L	N/A	N/A	
o-Anisidine (90-04-0)	10 ug/L	N/A	N/A	
1-Chloronaphthalene (90-13-1)	N/A	N/A	N/A	
Naphthalene (91-20-3)	10 ug/L	79.16 % Rec (ML)	28.64 % RSD (ML)	50 ug/L
2-Methylnaphthalene (91-57-6)	10 ug/L	N/A	N/A	
2-Chloronaphthalene (91-58-7)	10 ug/L	89.02 % Rec (ML)	13.68 % RSD (ML)	50 ug/L
beta-Naphthylamine (91-59-8)	N/A	N/A	N/A	
Methapyrilene (91-80-5)	100 ug/L	N/A	N/A	
3,3'-Dichlorobenzidine (91-94-1)	20 ug/L	97.7 % Rec (ML)	53.9 % RSD (ML)	50 ug/L
N-Nitrosodi-n-butylamine (924-16-3)	10 ug/L	N/A	N/A	
4-Aminobiphenyl (92-67-1)	20 ug/L	N/A	N/A	
Benzidine (92-87-5)	N/A	N/A	N/A	
4-Nitrobiphenyl (92-93-3)	10 ug/L	N/A	N/A	

N-Nitrosopyrrolidine (930-55-2)	40 ug/L	N/A	N/A	
Dihydrosafrole (94-58-6)	N/A	N/A	N/A	
Safrole (94-59-7)	10 ug/L	N/A	N/A	
Sulfallate (95-06-7)	10 ug/L	N/A	N/A	
o-Cresol (95-48-7)	N/A	N/A	N/A	
1,2-Dichlorobenzene (95-50-1)	10 ug/L	80.56 % Rec (ML)	24.78 % RSD (ML)	50 ug/L
o-Toluidine (95-53-4)	10 ug/L	N/A	N/A	
2-Chlorophenol (95-57-8)	10 ug/L	78.58 % Rec (ML)	29.94 % RSD (ML)	50 ug/L
5-Chloro-o-toluidine (95-79-4)	N/A	N/A	N/A	
2,4-Diaminotoluene (95-80-7)	10 ug/L	N/A	N/A	
4-Chloro-o-phenylenediamine (95-83-0)	N/A	N/A	N/A	
1,2,4,5-Tetrachlorobenzene (95-94-3)	10 ug/L	N/A	N/A	
2,4,5-Trichlorophenol (95-95-4)	20 ug/L	N/A	N/A	
Endosulfan-I (959-98-8)	N/A	N/A	N/A	
DBCP (96-12-8)	N/A	N/A	N/A	
Acetophenone (98-86-2)	10 ug/L	N/A	N/A	
Nitrobenzene	10 ug/L	102.9 % Rec	27.42 % RSD	50 ug/L

(98-95-3)		(ML)	(ML)	
3-Nitroaniline (99-09-2)	50 ug/L	N/A	N/A	
sym-Trinitrobenzene (99-35-4)	N/A	N/A	N/A	
5-Nitro-o-toluidine (99-55-8)	N/A	N/A	N/A	
5-Nitro-o-anisidine (99-59-2)	10 ug/L	N/A	N/A	
1,3-Dinitrobenzene (99-65-0)	20 ug/L	N/A	N/A	

export_analytes

Precision Descriptor Notes	The precision and accuracy values were determined using regression equations derived from a 15 laboratory validation study. The study determined analytes using reagent water, drinking water, surface water, and industrial wastewaters with additions at six concentrations over the range 5 to 1300 ug/L. Single operator precision, overall precision, and accuracy were found to be directly related to the concentration of the parameter and essentially independent of the sample matrix.
Detection Level Note	EQLs are estimated quantitation limits.

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8032A
Revision Information	Revision 1, December 1996
Method Name	**Descriptive Name:** Acrylamide in Aqueous Matrices Using Gas Chromatography **Official Name:** Acrylamide by Gas Chromatography
Media	**Media:** WATER
Subcategory	Organic
Citation	**SW-846 Online: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**
Method Download	**Download full method now (PDF file)**
Summary of Method	Samples are first subjected to bromination, then are salted out, and extracted. The extract is cleaned up using a Florisil column before being analyzed by gas chromatography (GC) and electron capture detection (ECD).
Scope and Application	This method determines trace amounts of acrylamide monomer in aqueous matrices. This method may also be applicable to other matrices and other similar analytes.
Applicable Concentration Range	0 - 5 ug/L.
Interferences	No interference is observed from seawater or in the presence of 8% of ammonium ions derived from ammonium bromide. Impurities from potassium bromide are removed by the Florisil cleanup procedure.
QC Requirements	Refer to Chapter One and Methods 8000, 3500, and 5000 for specific QC procedures. Procedures include: validation of sample preparation, introduction, and analysis, initial demonstration of capability, calibration verification, evaluation of retention times, analysis of method blanks, matrix spikes, duplicates, surrogates, and laboratory control samples.
Sample Handling	

	See SW-846 Chapter Four for information.
Max Holding Time	See SW-846 Chapter Four for information.
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	Method 8032A

Method *Acrylamide in Aqueous Matrices Using Gas Chromatography* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Acrylamide (79-06-1)	.032 ug/L	99.4 % Rec (SL)	2.5 % RSD (SL)	.2 ug/L

export_analytes

Precision Descriptor Notes	Performance criteria is based on the recovery of acrylamide as 2,3-dibromopropionamide in river water. The mean recovery is calculated from the results of five replicate analyses, spiked with 0.2 ug acrylamide monomer.
Detection Level Note	None.

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Method Summary

Method Source	**U.S. EPA Engineering and Analysis Division**
Method Number	1664
Revision Information	Revision A, February 1999
Method Name	**Descriptive Name:** Oil and Grease and Non-polar Material Using Solvent Extraction and Gravimetry **Official Name:** N-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-Polar Material) by Extraction and Gravimetry
Media	**Media:** WATER
Subcategory	Organic
Citation	**EPA Method Guidance CD-ROM (includes MCAWW Methods, and most current EPA Methods)**
Method Download	**Download full method now (PDF file)**
Summary of Method	A 1-L sample is acidified and serially extracted three times with n-hexane in a separatory funnel. The extract is dried over sodium sulfate. The solvent is distilled from the extract and the residue from the extract is desiccated. The amount of HEM in the extract is measured by weighing the dry residue on a balance. If the HEM is to be used for determination of SGT-HEM, the HEM is redissolved in n-hexane and silica gel is added to remove polar materials. The solution is filtered to remove the silica gel, the solvent is distilled, and the residue is desiccated. The amount of SGT-HEM in the extract is measured by weighing the dry residue on a balance.
Scope and Application	This method determines n-hexane extractable material (HEM; oil and grease) and n-hexane extractable material that is not adsorbed by silica gel (SGT-HEM; non-polar material) in surface and saline waters and industrial and domestic aqueous wastes. HEM includes relatively non-volatile hydrocarbons, vegetable oils, animal fats, waxes, soaps, greases, and related materials.
Applicable Concentration Range	5 - 1000 mg/L
Interferences	(A) Reagent contamination: Use high purity reagents.

	(B) Glassware contamination: Thoroughly clean glassware, including detergent wash and solvent rinse. (C) Interfering mass: Use a 0.45 micron filter if filter paper appears to allow the passage of sodium sulfate or silica gel fines that will be included in HEM/SGT-HEM weighing. (D) Emulsions: Use procedures in the method to break emulsions caused by complex matrices.
QC Requirements	The minimum recommended quality control requirements of this program consist of an initial demonstration of laboratory capability [analysis of initial precision and recovery samples (IPR), and determination of a method detection limit (MDL)], ongoing analysis of standards and blanks as a test of method performance.
Sample Handling	Do not prerinse bottle with sample before collection. If analysis is to be delayed for more than four hours, adjust the sample pH to less than 2 with HCl or H_2SO_4 solution at the time of collection, and refrigerate at 0 to 4°C until the time of extraction. The high probability that extractable matter may adhere to sampling equipment and result in measurements that are biased low precludes the collection of composite samples. Therefore, samples must be collected as grab samples. If a composite measurement is required, individual grab samples collected at prescribed time intervals must be analyzed separately and the concentrations averaged. Alternatively, samples can be collected in the field and composited in the laboratory.
Max Holding Time	28 days.
Relative Cost/Effort	$51 to $200
Sample Prep Method(s)	

Method *Oil and Grease and Non-polar Material Using Solvent Extraction and Gravimetry* has 2 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Oil content (E-10140)	1.4 mg/L	93 % Rec (ML)	8.7 % RSD (ML)	
SGT-HEM (E-12964)	1.4 mg/L	89 % Rec (ML)	13 % RSD (SL)	

export_analytes

Precision Descriptor Notes	Precision and accuracy values were determined using combined data from single laboratory and interlaboratory studies.
Detection Level Note	The MDL was determined at multiple laboratories per the procedure at 40 CFR part 136, Appendix B. The pooled single-operator MDL, using the 34 MDLs listed above plus the 5 MDLs

	EPA reported at proposal.

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Method Summary

Method Source	**Standard Methods**
Method Number	2540 B
Revision Information	Standard Methods Online
Method Name	**Descriptive Name:** Total Solids Dried at 103-105°C **Official Name:** Soilds in Water
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Scope and Application	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	
Max Holding Time	

Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method ***Total Solids Dried at 103-105^oC*** **has 1 analytes associated with it.**

Analyte	Detection Level	Bias	Precision	False Positive
Residue, Total (E-10151)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Detection Level Note	-

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8015C
Revision Information	Revision 3, Feb. 2007
Method Name	**Descriptive Name:** Nonhalogenated Organics by GC-FID **Official Name:** Nonhalogenated Organics Using GC/FID
Media	**Media:** VARIOUS
Subcategory	Organic
Citation	**SW-846 Update IVB**
Method Download	**Download full method now (PDF file)**
Summary of Method	Depending on the analytes of interest, samples are introduced into the GC by a variety of techniques, including: purge-and-trap, direct injection of aqueous samples, injection of the concentrate from azeotropic distillation, vacuum distillation, or following solvent extraction. Analytes are detected by a flame ionization detector.
Scope and Application	This method determines the concentration of various nonhalogenated volatile and semivolatile organic compounds in surface water, ground water, and solid matrices. In addition, gasoline range organics and diesel range organics may also be analyzed by this method.
Applicable Concentration Range	Not Available.
Interferences	(A) Contamination: Sample contamination may occur by diffusion of volatile organics through the septum seal during shipment and storage. The analysis of trip blanks will identify this problem. (B) Matrix interferences: Since the FID is non-selective, there is a potential for the interference of non-target compounds. (C) Memory Interferences: Carryover may occur whenever high and low concentration samples are analyzed in sequence. Rinse the sample syringe or purging device between samples. Also, unusually concentrated samples should be followed by injection of a solvent blank.

QC Requirements	Refer to Chapter One and Methods 8000, 3500, and 5000 for specific QC procedures. Procedures include: validation of sample preparation, introduction, and analysis, initial demonstration of proficiency, calibration verification, evaluation of retention times, analysis of method blanks, matrix spikes, duplicates, surrogates and laboratory control samples.
Sample Handling	See See the introductory material to SW-846 Chapter Four, "Organic Analytes," and Method 5035 for information. If the headspace technique is used, also see Method 5021.
Max Holding Time	See SW-846 Chapter Four for information
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	See Method 5000

Method *Nonhalogenated Organics by GC-FID* has 32 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Acrolein (107-02-8)	15 ug/L	146 % Rec (SL)	13 % RSD (SL)	25 ug/L
Ethyl cyanide (107-12-0)	6 ug/L	135 % Rec (SL)	5 % RSD (SL)	25 ug/L
Acrylonitrile (107-13-1)	9 ug/L	179 % Rec (SL)	7 % RSD (SL)	25 ug/L
Allyl alcohol (107-18-6)	N/A	N/A	N/A	
Ethylene glycol (107-21-1)	N/A	N/A	N/A	
Methyl n-propyl ketone (107-87-9)	2 ug/L	94 % Rec (SL)	3 % RSD (SL)	25 ug/L
4-Methyl-2-pentanone (108-10-1)	2 ug/L	66 % Rec (SL)	4 % RSD (SL)	25 ug/L
alpha-Picoline (109-06-8)	N/A	N/A	N/A	
Pyridine (110-86-1)	9 ug/L	92 % Rec (SL)	12 % RSD (SL)	25 ug/L

Paraldehyde (123-63-7)	N/A	N/A	N/A	
(E)-Crotonaldehyde (123-73-9)	N/A	N/A	N/A	
p-Dioxane (123-91-1)	15 ug/L	124 % Rec (SL)	16 % RSD (SL)	25 ug/L
Ethyl acetate (141-78-6)	8 ug/L	142 % Rec (SL)	7 % RSD (SL)	25 ug/L
Crotonaldehyde (4170-30-3)	N/A	N/A	N/A	
p,p'-DDT (50-29-3)	N/A	N/A	N/A	
Diethyl ether (60-29-7)	N/A	N/A	N/A	
Ethanol (64-17-5)	12 ug/L	152 % Rec (SL)	10 % RSD (SL)	25 ug/L
Methanol (67-56-1)	21 ug/L	166 % Rec (SL)	14 % RSD (SL)	25 ug/L
Isopropanol (67-63-0)	17 ug/L	167 % Rec (SL)	13 % RSD (SL)	25 ug/L
Acetone (67-64-1)	16 ug/L	126 % Rec (SL)	17 % RSD (SL)	25 ug/L
n-Propyl alcohol (71-23-8)	7 ug/L	N/A	N/A	25 ug/L
n-Butyl alcohol (71-36-3)	8 ug/L	127 % Rec (SL)	8 % RSD (SL)	25 ug/L
Acetonitrile (75-05-8)	6 ug/L	147 % Rec (SL)	5 % RSD (SL)	25 ug/L
Ethylene oxide (75-21-8)	9 ug/L	114 % Rec (SL)	10 % RSD (SL)	25 ug/L
Tert-Butyl Alcohol (75-65-0)	7 ug/L	122 % Rec (SL)	7 % RSD (SL)	25 ug/L
Isobutyl alcohol	8 ug/L	122 % Rec (SL)	8 % RSD (SL)	25 ug/L

(78-83-1)				
Methyl ethyl ketone (78-93-3)	5 ug/L	105 % Rec (SL)	6 % RSD (SL)	25 ug/L
Hexafluoro-2-propanol (I.S.) (920-66-1)	N/A	N/A	N/A	
N-Nitrosodi-n-butylamine (924-16-3)	N/A	N/A	N/A	
o-Toluidine (95-53-4)	N/A	N/A	N/A	
2-Chloroacrylonitrile (920-37-6)	N/A	N/A	N/A	
Hexafluoro-2-methyl-2-propanol (I.S.) (515-14-6)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	Example method performance data for non-purgeable volatiles in groundwater by azeotropic microdistillation (method 5031) are shown as examples and guidance. Performance data and related information are provided in SW-846 methods only as examples and guidance. The data do not represent required performance criteria for users of the methods. Instead, performance criteria should be developed on a project-specific basis, and the laboratory should establish in-house QC performance criteria for the application of this method.
Detection Level Note	-

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8100
Revision Information	Revision 0, September 1986
Method Name	**Descriptive Name:** Polynuclear Aromatic Hydrocarbons in Water and Solid Samples by GC-FID **Official Name:** Polynuclear Aromatic Hydrocarbons
Media	**Media:** VARIOUS
Subcategory	Organic
Citation	**SW-846 Online: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**
Method Download	**Download full method now (PDF file)**
Summary of Method	Samples are extracted and cleaned up (according to sample matrix) and then are directly injected into a gas chromatograph using the solvent flush technique and are detected by a flame ionization detector.
Scope and Application	This method determines the concentration of polynuclear aromatic hydrocarbons (PAHs) in water and solid samples using gas chromatography and flame ionization detection.
Applicable Concentration Range	Not Available.
Interferences	(A) Method interferences: Contaminants in solvents, reagents, glassware, and other sample processing hardware may lead to elevated baselines and/or other interferences in the gas chromatograms. Routine analysis of reagent blanks should be performed as a check for method interferences. Proper selection of reagents and purification of solvents by distillation in all-glass systems may be required. (B) Matrix interferences: Unique samples may require additional cleanup. (C) Refer to Methods 3500, 3600, and 8000.
QC Requirements	Refer to Chapter One and Methods 8000, 3500, and 3600 for specific QC procedures.

	Procedures include: validation of extraction and clean up techniques, analysis of quality control check samples, method blanks, matrix spikes, and surrogates. In addition, refer to Method 8000, Section 8.6 for procedures to check the GC system operation.
Sample Handling	See SW-846 Chapter Four for information. See the introductory material to this chapter, Organic Analytes, Section 4.1. Extracts must be stored under refrigeration.
Max Holding Time	Aqueous samples - 7 days (sample), 40 days (extract). Solid samples - 14 days (sample), 40 (extract). Also, see SW-846 Chapter Four for information.
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	Methods 3510, 3520, 3540, or 3550

Method *Polynuclear Aromatic Hydrocarbons in Water and Solid Samples by GC-FID* has 16 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Anthracene (120-12-7)	N/A	56.7 % Rec (ML)	45 % RSD (ML)	20 ug/L
Pyrene (129-00-0)	N/A	68.4 % Rec (ML)	42 % RSD (ML)	20 ug/L
Benzo(g,h,i)perylene (191-24-2)	N/A	45.5 % Rec (ML)	59.1 % RSD (ML)	20 ug/L
Indeno(1,2,3-cd)pyrene (193-39-5)	N/A	54.3 % Rec (ML)	42.1 % RSD (ML)	20 ug/L
Benzo(b)fluoranthene (205-99-2)	N/A	78.1 % Rec (ML)	38 % RSD (ML)	20 ug/L
Fluoranthene (206-44-0)	N/A	68.4 % Rec (ML)	32.2 % RSD (ML)	20 ug/L
Benzo(k)fluoranthene (207-08-9)	N/A	59 % Rec (ML)	69.8 % RSD (ML)	20 ug/L
Acenaphthylene (208-96-8)	N/A	59.6 % Rec (ML)	46.4 % RSD (ML)	20 ug/L
Chrysene (218-01-9)	N/A	76.1 % Rec (ML)	64.6 % RSD (ML)	20 ug/L

Benzo(a)pyrene (50-32-8)	N/A	56.1 % Rec (ML)	53.1 % RSD (ML)	20 ug/L
Dibenzo(a,h)anthracene (53-70-3)	N/A	40.5 % Rec (ML)	45.4 % RSD (ML)	20 ug/L
Benzo(a)anthracene (56-55-3)	N/A	73.3 % Rec (ML)	34.1 % RSD (ML)	20 ug/L
Acenaphthene (83-32-9)	N/A	54.7 % Rec (ML)	65.1 % RSD (ML)	20 ug/L
Phenanthrene (85-01-8)	N/A	67.3 % Rec (ML)	45.1 % RSD (ML)	20 ug/L
Fluorene (86-73-7)	N/A	53.4 % Rec (ML)	56.9 % RSD (ML)	20 ug/L
Naphthalene (91-20-3)	N/A	53.5 % Rec (ML)	47.9 % RSD (ML)	20 ug/L

export_analytes

Precision Descriptor Notes	Precision and accuracy values were calculated using regression equations from EPA Method 610 (reproduced in Method 8100).
Detection Level Note	None.

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8270D
Revision Information	Revision 4.0, January 1998
Method Name	**Descriptive Name:** Semivolatile Organic Compounds by GC/MS **Official Name:** Semivolatile Organic Compounds by GC/MS
Media	**Media:** VARIOUS
Subcategory	Organic
Citation	**SW-846 Update IVA**
Method Download	**Download full method now (PDF file)**
Summary of Method	The samples are prepared for analysis by gas chromatography/mass spectrometry (GC/MS) using the appropriate sample preparation (refer to Method 3500) and, if necessary, sample cleanup procedures (refer to Method 3600). The semivolatile compounds are introduced into the GC/MS by injecting the sample extract into a gas chromatograph (GC) with a narrow-bore fused-silica capillary column. The GC column is temperature-programmed to separate the analytes, which are then detected with a mass spectrometer (MS) connected to the gas chromatograph. Analytes eluted from the capillary column are introduced into the mass spectrometer via a jet separator or a direct connection. Identification of target analytes is accomplished by comparing their mass spectra with the electron impact (or electron impact-like) spectra of authentic standards. Quantitation is accomplished by comparing the response of a major (quantitation) ion relative to an internal standard using a five-point calibration curve. NOTE: This method can be used in conjunction with the following sample preparation procedures: Air (particulates and sorbent resin)- Method 3542 Water (including TCLP leachates) - Methods 3510, 3520, 3535 Soil/sediment - Methods 3540, 3541, 3545, 3546 3550, 3560, 3561 Waste - Methods 3540, 3541, 3545, 3546, 3550, 3560, 3561, 3580
Scope and Application	Method 8270 is used to determine the concentration of semivolatile organic compounds in extracts prepared from many types of solid waste matrices, soils, air sampling media and water samples. Direct injection of a sample may be used in limited applications.

Applicable Concentration Range	None given.
Interferences	(1) Contaminants from glassware. (2) Matrix interferences that are co-extracted with sample. (3) Contamination by carryover can occur whenever high-concentration and low-concentration samples are sequentially analyzed. To reduce carryover, the sample syringe must be rinsed with solvent between sample injections. Whenever an unusually concentrated sample is encountered, it should be followed by the analysis of solvent to check for cross-contamination.
QC Requirements	See SW-846 Method 8000 and 3500. Procedures include: validation of sample preparation, introduction, and analysis, initial demonstration of proficiency, calibration verification, evaluation of retention times, analysis of method blanks, matrix spikes, duplicates, surrogates, and laboratory control samples.
Sample Handling	Store the extract at 4 degrees C, protected from light in screw-cap vials equipped with unpierced Teflon lined septa. See SW-846, Chapter 4, Organic Analytes, Section 4.1. See SW-846 Chapter Four for information.
Max Holding Time	Aqueous samples - 7 days (sample), 40 days (extract). Solid samples - 14 days (sample), 40 (extract). Also, see SW-846 Chapter Four for information.
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	See Method Summary

Method *Semivolatile Organic Compounds by GC/MS* has 242 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
p-Nitroaniline (100-01-6)	20 ug/L	N/A	N/A	
4-Nitrophenol (100-02-7)	10 ug/L	58.56 % Rec (ML)	50.48 % RSD (ML)	50 ug/L
1,4-Dinitrobenzene (100-25-4)	40 ug/L	N/A	N/A	
Benzyl alcohol (100-51-6)	20 ug/L	N/A	N/A	
N-Nitrosopiperidine (100-75-4)	20 ug/L	N/A	N/A	
Anilazine (101-05-3)	100 ug/L	N/A	N/A	

4,4'-Methylenebis(2-chloroaniline) (101-14-4)	N/A	N/A	N/A	
Barban (101-27-9)	200 ug/L	N/A	N/A	
4-Bromophenyl phenyl ether (101-55-3)	10 ug/L	88.32 % Rec (ML)	17.32 % RSD (ML)	50 ug/L
4,4'-Methylenebis(N,N-dimethyl) benzenamine (101-61-1)	N/A	N/A	N/A	
4,4'-Oxydianiline (101-80-4)	20 ug/L	N/A	N/A	
Heptachlor epoxide (1024-57-3)	N/A	88.26 % Rec (ML)	29.28 % RSD (ML)	50 ug/L
Endosulfan sulfate (1031-07-8)	N/A	41.05 % Rec (ML)	57.85 % RSD (ML)	20 ug/L
2,4-Dimethylphenol (105-67-9)	10 ug/L	79.82 % Rec (ML)	24.62 % RSD (ML)	50 ug/L
N-Nitrosomethylethylamine (10595-95-6)	N/A	N/A	N/A	
p-Cresol (106-44-5)	N/A	N/A	N/A	
1,4-Dichlorobenzene (106-46-7)	10 ug/L	70.06 % Rec (ML)	29.72 % RSD (ML)	50 ug/L
p-Chloroaniline (106-47-8)	20 ug/L	N/A	N/A	
p-Phenylenediamine (106-50-3)	N/A	N/A	N/A	
p-Benzoquinone (106-51-4)	10 ug/L	N/A	N/A	
Tetraethyl pyrophosphate (107-49-3)	40 ug/L	N/A	N/A	
Maleic anhydride (108-31-6)	N/A	N/A	N/A	

m-Cresol (108-39-4)	N/A	N/A	N/A	
Resorcinol (108-46-3)	100 ug/L	N/A	N/A	
bis(2-Chloroisopropyl) ether (108-60-1)	10 ug/L	98.38 % Rec (ML)	27.08 % RSD (ML)	50 ug/L
Phenol (108-95-2)	10 ug/L	45.52 % Rec (ML)	36.16 % RSD (ML)	50 ug/L
Benzenethiol (108-98-5)	N/A	N/A	N/A	
alpha-Picoline (109-06-8)	N/A	N/A	N/A	
Pyridine (110-86-1)	N/A	N/A	N/A	
PCB-1260 (11096-82-5)	N/A	59.28 % Rec (ML)	46.64 % RSD (ML)	50 ug/L
PCB-1254 (11097-69-1)	N/A	N/A	N/A	
PCB-1221 (11104-28-2)	N/A	N/A	N/A	
PCB-1232 (11141-16-5)	N/A	N/A	N/A	
bis(2-Chloroethyl) ether (111-44-4)	10 ug/L	82.92 % Rec (ML)	35.2 % RSD (ML)	50 ug/L
bis(2-Chloroethoxy)methane (111-91-1)	10 ug/L	101.92 % Rec (ML)	30.02 % RSD (ML)	50 ug/L
Fensulfothion (115-90-2)	40 ug/L	N/A	N/A	
2-Aminoanthraquinone (117-79-3)	20 ug/L	N/A	N/A	
Dichlone (117-80-6)	N/A	N/A	N/A	
bis(2-Ethylhexyl) phthalate	N/A	81.64 % Rec	37.34 % RSD	50 ug/L

(117-81-7)		(ML)	(ML)	
Di-n-octyl phthalate (117-84-0)	10 ug/L	74.42 % Rec (ML)	39.38 % RSD (ML)	50 ug/L
Hexachlorobenzene (118-74-1)	10 ug/L	75.32 % Rec (ML)	41.96 % RSD (ML)	50 ug/L
3,3'-Dimethoxybenzidine (119-90-4)	100 ug/L	N/A	N/A	
o-Tolidine (119-93-7)	N/A	N/A	N/A	
Anthracene (120-12-7)	N/A	81.36 % Rec (ML)	25.72 % RSD (ML)	50 ug/L
Isosafrole (120-58-1)	10 ug/L	N/A	N/A	
Piperonyl sulfoxide (120-62-7)	100 ug/L	N/A	N/A	
p-Cresidine (120-71-8)	10 ug/L	N/A	N/A	
1,2,4-Trichlorobenzene (120-82-1)	10 ug/L	92.42 % Rec (ML)	21.78 % RSD (ML)	50 ug/L
2,4-Dichlorophenol (120-83-2)	10 ug/L	87.26 % Rec (ML)	23.56 % RSD (ML)	50 ug/L
2,4-Dinitrotoluene (121-14-2)	10 ug/L	82.38 % Rec (ML)	24 % RSD (ML)	50 ug/L
Malathion (121-75-5)	50 ug/L	N/A	N/A	
Phentermine (122-09-8)	N/A	N/A	N/A	
Diphenylamine (122-39-4)	N/A	N/A	N/A	
1,2-Diphenylhydrazine (122-66-7)	N/A	N/A	N/A	
Hydroquinone (123-31-9)	N/A	N/A	N/A	

O,O,O-Triethylphosphorothioate (126-68-1)	N/A	N/A	N/A	
PCB-1248 (12672-29-6)	N/A	N/A	N/A	
Tris(2,3-dibromopropyl)phosphate (126-72-7)	200 ug/L	N/A	N/A	
PCB-1016 (12674-11-2)	N/A	N/A	N/A	
Demeton-S (126-75-0)	10 ug/L	N/A	N/A	
Pyrene (129-00-0)	10 ug/L	83.68 % Rec (ML)	15.62 % RSD (ML)	50 ug/L
1,4-Naphthoquinone (130-15-4)	10 ug/L	N/A	N/A	
Terbufos (13071-79-9)	20 ug/L	N/A	N/A	
Dimethyl phthalate (131-11-3)	10 ug/L	30.3 % Rec (ML)	95.8 % RSD (ML)	10 ug/L
Phosphamidon (13171-21-6)	100 ug/L	N/A	N/A	
Dinex (131-89-5)	N/A	N/A	N/A	
3-Amino-9-ethyl carbazole (132-32-1)	N/A	N/A	N/A	
Dibenzofuran (132-64-9)	10 ug/L	N/A	N/A	
Captan (133-06-2)	50 ug/L	N/A	N/A	
alpha-Naphthylamine (134-32-7)	N/A	N/A	N/A	
2,4,5-Trimethylaniline (137-17-7)	10 ug/L	N/A	N/A	
Aramite	20 ug/L	N/A	N/A	

(140-57-8)				
Dicrotophos (141-66-2)	10 ug/L	N/A	N/A	
Kepone (143-50-0)	20 ug/L	N/A	N/A	
Octamethylpyrophosphoramide (152-16-9)	200 ug/L	N/A	N/A	
Carbofuran (1563-66-2)	10 ug/L	N/A	N/A	
Trifluralin (1582-09-8)	10 ug/L	N/A	N/A	
Bromoxynil (1689-84-5)	10 ug/L	N/A	N/A	
Nitrofen (1836-75-5)	20 ug/L	N/A	N/A	
Hexachloropropene (1888-71-7)	10 ug/L	N/A	N/A	
Benzo(g,h,i)perylene (191-24-2)	10 ug/L	96.28 % Rec (ML)	50.12 % RSD (ML)	50 ug/L
Dibenzo(a,e)pyrene (192-65-4)	10 ug/L	N/A	N/A	
Indeno(1,2,3-cd)pyrene (193-39-5)	10 ug/L	71.8 % Rec (ML)	50.88 % RSD (ML)	50 ug/L
Benzo(b)fluoranthene (205-99-2)	10 ug/L	89.4 % Rec (ML)	30.92 % RSD (ML)	50 ug/L
Fluoranthene (206-44-0)	10 ug/L	83.2 % Rec (ML)	26.8 % RSD (ML)	50 ug/L
Benzo(k)fluoranthene (207-08-9)	10 ug/L	83.88 % Rec (ML)	35.8 % RSD (ML)	50 ug/L
Acenaphthylene (208-96-8)	10 ug/L	90.48 % Rec (ML)	24.92 % RSD (ML)	50 ug/L
EPN (2104-64-5)	10 ug/L	N/A	N/A	

Leptophos (21609-90-5)	10 ug/L	N/A	N/A	
Chrysene (218-01-9)	10 ug/L	91 % Rec (ML)	32.82 % RSD (ML)	50 ug/L
Tetrachlorvinphos (22248-79-9)	20 ug/L	N/A	N/A	
Dibenz(a,j)acridine (224-42-0)	10 ug/L	N/A	N/A	
Diallate (2303-16-4)	10 ug/L	N/A	N/A	
Phosalone (2310-17-0)	100 ug/L	N/A	N/A	
Mirex (2385-85-5)	10 ug/L	N/A	N/A	
Pronamide (23950-58-5)	10 ug/L	N/A	N/A	
Zinophos (297-97-2)	N/A	N/A	N/A	
Methyl parathion (298-00-0)	10 ug/L	N/A	N/A	
Phorate (298-02-2)	10 ug/L	N/A	N/A	
Demeton-O (298-03-3)	10 ug/L	N/A	N/A	
Disulfoton (298-04-4)	10 ug/L	N/A	N/A	
Naled (300-76-5)	20 ug/L	N/A	N/A	
Aldrin (309-00-2)	N/A	81.32 % Rec (ML)	45.26 % RSD (ML)	50 ug/L
Mexacarbate (315-18-4)	20 ug/L	N/A	N/A	
alpha-BHC	N/A	N/A	N/A	

(319-84-6)				
beta-BHC (319-85-7)	N/A	85.12 % Rec (ML)	26.12 % RSD (ML)	50 ug/L
delta-BHC (319-86-8)	N/A	26.82 % Rec (ML)	92.66 % RSD (ML)	50 ug/L
Endosulfan-II (33213-65-9)	N/A	N/A	N/A	
Fluchloralin (33245-39-5)	20 ug/L	N/A	N/A	
Sulfotepp (3689-24-5)	N/A	N/A	N/A	
Dinocap (39300-45-3)	100 ug/L	N/A	N/A	
Isodrin (465-73-6)	20 ug/L	N/A	N/A	
Chlorfenvinphos (470-90-6)	20 ug/L	N/A	N/A	
Phenobarbitol (50-06-6)	10 ug/L	N/A	N/A	
p,p'-DDT (50-29-3)	N/A	72.44 % Rec (ML)	63.84 % RSD (ML)	50 ug/L
Benzo(a)pyrene (50-32-8)	N/A	89.74 % Rec (ML)	34.7 % RSD (ML)	50 ug/L
Chlorobenzilate (510-15-6)	10 ug/L	N/A	N/A	
Trimethylphosphate (512-56-1)	10 ug/L	N/A	N/A	
2,4-Dinitrophenol (51-28-5)	50 ug/L	44.92 % Rec (ML)	94.58 % RSD (ML)	50 ug/L
4-Chloro-m-phenylenediamine (5131-60-2)	N/A	N/A	N/A	
Propylthiouracil (51-52-5)	100 ug/L	N/A	N/A	

Urethane (51-79-6)	N/A	N/A	N/A	
1,2-Dinitrobenzene (528-29-0)	40 ug/L	N/A	N/A	
Famphur (52-85-7)	20 ug/L	N/A	N/A	
2-Methyl-4,6-dinitrophenol (534-52-1)	N/A	N/A	N/A	
PCB-1242 (53469-21-9)	N/A	N/A	N/A	
Endrin ketone (53494-70-5)	N/A	N/A	N/A	
Dibenzo(a,h)anthracene (53-70-3)	N/A	97.44 % Rec (ML)	59.5 % RSD (ML)	50 ug/L
HN-1 (538-07-8)	N/A	N/A	N/A	
Acetamidofluorene (53-96-3)	20 ug/L	N/A	N/A	
Nicotine (54-11-5)	20 ug/L	N/A	N/A	
1,3-Dichlorobenzene (541-73-1)	10 ug/L	84.6 % Rec (ML)	41.22 % RSD (ML)	50 ug/L
N-Nitrosodiethylamine (55-18-5)	20 ug/L	N/A	N/A	
Fenthion (55-38-9)	10 ug/L	N/A	N/A	
HN-3 (555-77-1)	N/A	N/A	N/A	
Ethion (563-12-2)	10 ug/L	N/A	N/A	
Ethyl parathion (56-38-2)	10 ug/L	N/A	N/A	
3-Methylcholanthrene	10 ug/L	N/A	N/A	

(56-49-5)				
Diethylstilbestrol (56-53-1)	20 ug/L	N/A	N/A	
Benzo(a)anthracene (56-55-3)	10 ug/L	86.8 % Rec (ML)	25.44 % RSD (ML)	50 ug/L
4-Nitroquinoline-1-oxide (56-57-5)	40 ug/L	N/A	N/A	
Coumaphos (56-72-4)	40 ug/L	N/A	N/A	
Strychnine (57-24-9)	40 ug/L	N/A	N/A	
Dilantin (57-41-0)	N/A	N/A	N/A	
Chlordane (57-74-9)	N/A	N/A	N/A	
7,12-Dimethylbenz(a)anthracene (57-97-6)	10 ug/L	N/A	N/A	
Toluene-2,4-diisocyanate (584-84-9)	N/A	N/A	N/A	
Lindane (58-89-9)	N/A	N/A	N/A	
2,3,4,6-Tetrachlorophenol (58-90-2)	10 ug/L	N/A	N/A	
1-Acetyl-2-thiourea (591-08-2)	1000 ug/L	N/A	N/A	
4-Chloro-3-methylphenol (59-50-7)	N/A	N/A	N/A	
N-Nitrosomorpholine (59-89-2)	N/A	N/A	N/A	
Aminoazobenzene (60-09-3)	10 ug/L	N/A	N/A	
p-Dimethylaminoazobenzene (60-11-7)	N/A	N/A	N/A	

5-Nitroacenaphthene (602-87-9)	10 ug/L	N/A	N/A	
Dimethoate (60-51-5)	20 ug/L	N/A	N/A	
Dieldrin (60-57-1)	N/A	81.68 % Rec (ML)	25.86 % RSD (ML)	50 ug/L
2,6-Dinitrotoluene (606-20-2)	10 ug/L	98.8 % Rec (ML)	19.7 % RSD (ML)	50 ug/L
Pentachlorobenzene (608-93-5)	10 ug/L	N/A	N/A	
N-Nitrosodi-n-propylamine (621-64-7)	N/A	99.56 % Rec (ML)	44.94 % RSD (ML)	50 ug/L
Phenacetin (62-44-2)	20 ug/L	N/A	N/A	
Ethyl methanesulfonate (62-50-0)	20 ug/L	N/A	N/A	
Aniline (62-53-3)	N/A	N/A	N/A	
Dichlorvos (62-73-7)	10 ug/L	N/A	N/A	
N-Nitrosodimethylamine (62-75-9)	N/A	N/A	N/A	
Carbaryl (63-25-2)	N/A	N/A	N/A	
Diethylsulfate (64-67-5)	100 ug/L	N/A	N/A	
Benzoic acid (65-85-0)	50 ug/L	N/A	N/A	
Methyl methanesulfonate (66-27-3)	10 ug/L	N/A	N/A	
Hexachloroethane (67-72-1)	10 ug/L	71.34 % Rec (ML)	18.6 % RSD (ML)	50 ug/L
Hexamethylphosphoramide	20 ug/L	N/A	N/A	

(680-31-9)				
Monocrotophos (6923-22-4)	40 ug/L	N/A	N/A	
Pyridine, 3-chloromethyl-, hydrochloride (6959-48-4)	N/A	N/A	N/A	
4-Chlorophenylphenyl ether (7005-72-3)	10 ug/L	92.06 % Rec (ML)	29.08 % RSD (ML)	50 ug/L
Hexachlorophene (70-30-4)	50 ug/L	N/A	N/A	
Endrin (72-20-8)	N/A	N/A	N/A	
Mestranol (72-33-3)	20 ug/L	N/A	N/A	
Methoxychlor (72-43-5)	N/A	N/A	N/A	
4,4'-DDD (72-54-8)	N/A	55.2 % Rec (ML)	64.08 % RSD (ML)	50 ug/L
4,4'-DDE (72-55-9)	N/A	68.92 % Rec (ML)	36.92 % RSD (ML)	50 ug/L
Phosmet (732-11-6)	40 ug/L	N/A	N/A	
Endrin aldehyde (7421-93-4)	N/A	68.28 % Rec (ML)	71.76 % RSD (ML)	50 ug/L
Heptachlor (76-44-8)	N/A	81.06 % Rec (ML)	49.54 % RSD (ML)	50 ug/L
Crotoxyphos (7700-17-6)	20 ug/L	N/A	N/A	
Hexachlorocyclopentadiene (77-47-4)	10 ug/L	N/A	N/A	
Mevinphos (7786-34-7)	10 ug/L	N/A	N/A	
Tri-p-tolyl phosphate (78-32-0)	10 ug/L	N/A	N/A	

Dioxathion (78-34-2)	N/A	N/A	N/A	
Isophorone (78-59-1)	10 ug/L	114.82 % Rec (ML)	33.52 % RSD (ML)	50 ug/L
Carbophenothion (786-19-6)	10 ug/L	N/A	N/A	
Toxaphene (8001-35-2)	N/A	N/A	N/A	
Pentachloronitrobenzene (82-68-8)	20 ug/L	N/A	N/A	
Acenaphthene (83-32-9)	10 ug/L	96.38 % Rec (ML)	19.66 % RSD (ML)	50 ug/L
Diethyl phthalate (84-66-2)	10 ug/L	45 % Rec (ML)	52.44 % RSD (ML)	50 ug/L
Di-n-butyl phthalate (84-74-2)	10 ug/L	60.42 % Rec (ML)	40.2 % RSD (ML)	50 ug/L
Phenanthrene (85-01-8)	10 ug/L	86.88 % Rec (ML)	15.5 % RSD (ML)	50 ug/L
Phthalic anhydride (85-44-9)	100 ug/L	N/A	N/A	
Butyl benzyl phthalate (85-68-7)	10 ug/L	62.64 % Rec (ML)	54.84 % RSD (ML)	50 ug/L
N-Nitrosodiphenylamine (86-30-6)	10 ug/L	N/A	N/A	
Azinphos-methyl (86-50-0)	100 ug/L	N/A	N/A	
Fluorene (86-73-7)	10 ug/L	90 % Rec (ML)	14.22 % RSD (ML)	50 ug/L
2,6-Dichlorophenol (87-65-0)	10 ug/L	N/A	N/A	
Hexachlorobutadiene (87-68-3)	10 ug/L	68.98 % Rec (ML)	26.98 % RSD (ML)	50 ug/L
Pentachlorophenol	50 ug/L	96.98 % Rec	38.66 % RSD	50 ug/L

(87-86-5)		(ML)	(ML)	
2,4,6-Trichlorophenol (88-06-2)	10 ug/L	90.64 % Rec (ML)	25.62 % RSD (ML)	50 ug/L
2-Nitroaniline (88-74-4)	50 ug/L	N/A	N/A	
2-Nitrophenol (88-75-5)	10 ug/L	104.7 % Rec (ML)	32.2 % RSD (ML)	50 ug/L
Dinoseb (88-85-7)	20 ug/L	N/A	N/A	
o-Anisidine (90-04-0)	10 ug/L	N/A	N/A	
1-Chloronaphthalene (90-13-1)	N/A	N/A	N/A	
Naphthalene (91-20-3)	10 ug/L	79.16 % Rec (ML)	28.64 % RSD (ML)	50 ug/L
2-Methylnaphthalene (91-57-6)	10 ug/L	N/A	N/A	
2-Chloronaphthalene (91-58-7)	10 ug/L	89.02 % Rec (ML)	13.68 % RSD (ML)	50 ug/L
beta-Naphthylamine (91-59-8)	N/A	N/A	N/A	
Methapyrilene (91-80-5)	100 ug/L	N/A	N/A	
3,3'-Dichlorobenzidine (91-94-1)	20 ug/L	97.7 % Rec (ML)	53.9 % RSD (ML)	50 ug/L
N-Nitrosodi-n-butylamine (924-16-3)	10 ug/L	N/A	N/A	
4-Aminobiphenyl (92-67-1)	20 ug/L	N/A	N/A	
Benzidine (92-87-5)	N/A	N/A	N/A	
4-Nitrobiphenyl (92-93-3)	10 ug/L	N/A	N/A	

N-Nitrosopyrrolidine (930-55-2)	40 ug/L	N/A	N/A	
Dihydrosafrole (94-58-6)	N/A	N/A	N/A	
Safrole (94-59-7)	10 ug/L	N/A	N/A	
Sulfallate (95-06-7)	10 ug/L	N/A	N/A	
o-Cresol (95-48-7)	N/A	N/A	N/A	
1,2-Dichlorobenzene (95-50-1)	10 ug/L	80.56 % Rec (ML)	24.78 % RSD (ML)	50 ug/L
o-Toluidine (95-53-4)	10 ug/L	N/A	N/A	
2-Chlorophenol (95-57-8)	10 ug/L	78.58 % Rec (ML)	29.94 % RSD (ML)	50 ug/L
5-Chloro-o-toluidine (95-79-4)	N/A	N/A	N/A	
2,4-Diaminotoluene (95-80-7)	10 ug/L	N/A	N/A	
4-Chloro-o-phenylenediamine (95-83-0)	N/A	N/A	N/A	
1,2,4,5-Tetrachlorobenzene (95-94-3)	10 ug/L	N/A	N/A	
2,4,5-Trichlorophenol (95-95-4)	20 ug/L	N/A	N/A	
Endosulfan-I (959-98-8)	N/A	N/A	N/A	
DBCP (96-12-8)	N/A	N/A	N/A	
Acetophenone (98-86-2)	10 ug/L	N/A	N/A	
Nitrobenzene	10 ug/L	102.9 % Rec	27.42 % RSD	50 ug/L

(98-95-3)		(ML)	(ML)	
3-Nitroaniline (99-09-2)	50 ug/L	N/A	N/A	
sym-Trinitrobenzene (99-35-4)	N/A	N/A	N/A	
5-Nitro-o-toluidine (99-55-8)	N/A	N/A	N/A	
5-Nitro-o-anisidine (99-59-2)	10 ug/L	N/A	N/A	
1,3-Dinitrobenzene (99-65-0)	20 ug/L	N/A	N/A	

export_analytes

Precision Descriptor Notes	The precision and accuracy values were determined using regression equations derived from a 15 laboratory validation study. The study determined analytes using reagent water, drinking water, surface water, and industrial wastewaters with additions at six concentrations over the range 5 to 1300 ug/L. Single operator precision, overall precision, and accuracy were found to be directly related to the concentration of the parameter and essentially independent of the sample matrix.
Detection Level Note	EQLs are estimated quantitation limits.

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2310 B

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Method Summary

No data found.

Method *Acidity by Titration* has 0 analytes associated with it.

no data found no data found

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Method Summary

Method Source	**Standard Methods**
Method Number	2510B
Revision Information	Standard Methods Online
Method Name	**Descriptive Name:** Conductivity - Laboratory Method **Official Name:** Conductivity - Laboratory Method
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	In the laboratory, conductance (or resistance) of a standard KCl solution is measured and from the corresponding conductivity, a cell constant is calculated. Once the cell constant has been determined, or set, the conductivity of an unknown solution will be displayed by the meter.
Scope and Application	This method covers the determination of conductivity in surface waters, drinking water, and wastewater.
Applicable Concentration Range	None given.
Interferences	None Provided.
QC Requirements	Calibration of instrument
Sample Handling	Collect at least 500 mL sample in a polyethylene or glass bottle. Refrigerate.
Max Holding Time	28 days

Relative Cost/Effort	Less than $50
Sample Prep Method(s)	None required

Method *Conductivity - Laboratory Method* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Specific conductivity (E-10184)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	Reproducibility of 1 to 2% is expected after an instrument has been calibrated with such data as is shown in Table 2510:I.
Detection Level Note	None given.

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8260B
Revision Information	Rev. 2, 1996
Method Name	**Descriptive Name:** Volatile Organic Compounds by GC/MS **Official Name:** Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
Media	**Media:** VARIOUS
Subcategory	Organic
Citation	**SW-846 Online: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**
Method Download	**Download full method now (PDF file)**
Summary of Method	Volatile compounds are introduced into a GC with a capillary column by a purge-and-trap method or by other methods including azeotropic distillation, vacuum distillation, head space, direct injection, etc. Identification of target analytes os accomplished by comparing their mass spectra with the electron impact (or electron impact-like) spectra of authentic standards. Quantitation is accomplished by comparing the response of a major ion relative to an internal standard using a five-point calibration curve.
Scope and Application	This method determines most volatile organic compounds with boiling points below 200 C.
Applicable Concentration Range	Variable per analyte.
Interferences	Contamination by diffusion of volatile organic compounds may occur through the septum seal of the sample container while in the laboratory or during shipment and/or storage. Special precautions must be taken when analyzing for methylene chloride, a common laboratory solvent. Teh analytical and sample storage area should be isolated from all atmospheric sources of methylene chloride. Otherwise, random background levels will result. Major contaminant sources are volatile materials in the laboratory and impurities in the inert purging gas and in the sorbent trap. The use of non-polytetrafluoroethylene (PTFE) thread sealants, plastic tubing, or flow controllers with rubber components should be avoided, since such materials out-gas organic compounds which will be concentrated in the trap during the purge operation. Analyses

	of calibration and reagent blanks provide information about the presence of contaminants. When potential interfering peaks are noted in blanks, the analyst should change the purge gas source and regenerate the molecular sieve purge gas filter. Subtracting blank values from sample results is not permitted. If reporting values without correcting for the blank results in what the laboratory feels is a false positive result for a sample, the laboratory should fully explain this in text accompanying the uncorrected data.
QC Requirements	QC procedures include evaluation of retention time windows, calibration verification, acceptable chromatographic analysis of samples, GC/MS tuning to meet specifications including acceptable 4-bromofluorobenzene (BFB) every 12-hour shift, initial demonstration of proficiency by the laboratory, and analysis of appropriate QC samples (including method blanks, matrix spikes, duplicates, and laboratory control samples (LCS) in each analytical batch plus the addition of surrogates to each field sample and QC sample.
Sample Handling	Collect grab samples in 40 mL glass screw cap VOA vials with Teflon-lined silicone septa. If residual chlorine is present collect the sample in a 125 mL container which has been pre-preserved with sodium thiosulfate solution, swirl gently and then transfer to a 40 mL VOA vial. Cool to 4 degrees C and adjust pH to <2 from time of collection until analysis.
Max Holding Time	14 days (after collection)
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	5030, 5035, 5031, 5032, 5021, 5041

Method *Volatile Organic Compounds by GC/MS* has 117 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Ethylbenzene (100-41-4)	N/A	99 % Rec (SL)	5.3 % RSD (SL)	.5 ug/L
Styrene (100-42-5)	N/A	96 % Rec (SL)	19.8 % RSD (SL)	.5 ug/L
Benzyl chloride (100-44-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
cis-1,3-Dichloropropene (10061-01-5)	N/A	N/A	0 % RSD (SL)	0 ug/L
trans-1,3-Dichloropropene (10061-02-6)	N/A	N/A	0 % RSD (SL)	0 ug/L
n-Propylbenzene (103-65-1)	N/A	99 % Rec (SL)	6.7 % RSD (SL)	.5 ug/L

n-Butylbenzene (104-51-8)	N/A	94 % Rec (SL)	6.4 % RSD (SL)	.5 ug/L
p-Xylene (106-42-3)	N/A	97 % Rec (SL)	6.3 % RSD (SL)	.5 ug/L
p-Chlorotoluene (106-43-4)	N/A	96 % Rec (SL)	7.3 % RSD (SL)	.5 ug/L
1,4-Dichlorobenzene (106-46-7)	N/A	106 % Rec (SL)	6.1 % RSD (SL)	.1 ug/L
Epichlorohydrin (106-89-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,2-Dibromoethane (106-93-4)	N/A	97 % Rec (SL)	5.8 % RSD (SL)	.5 ug/L
Acrolein (107-02-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
Allyl chloride (107-05-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,2-Dichloroethane (107-06-2)	N/A	100 % Rec (SL)	6.3 % RSD (SL)	.1 ug/L
2-Chloroethanol (107-07-3)	N/A	N/A	0 % RSD (SL)	0 ug/L
n-Propyl Amine (107-10-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
Ethyl cyanide (107-12-0)	N/A	N/A	0 % RSD (SL)	0 ug/L
Acrylonitrile (107-13-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
Allyl alcohol (107-18-6)	N/A	N/A	0 % RSD (SL)	0 ug/L
Propargyl Alcohol (107-19-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
Methyl n-propyl ketone (107-87-9)	N/A	N/A	0 % RSD (SL)	0 ug/L
Vinyl acetate	N/A	N/A	0 % RSD (SL)	0 ug/L

(108-05-4)				
4-Methyl-2-pentanone (108-10-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
m-Xylene (108-38-3)	N/A	106 % Rec (SL)	4.3 % RSD (SL)	.5 ug/L
Mesitylene (108-67-8)	N/A	101 % Rec (SL)	4.2 % RSD (SL)	.5 ug/L
Bromobenzene (108-86-1)	N/A	97 % Rec (SL)	7.6 % RSD (SL)	.5 ug/L
Toluene (108-88-3)	N/A	100 % Rec (SL)	5.9 % RSD (SL)	.5 ug/L
Chlorobenzene (108-90-7)	N/A	91 % Rec (SL)	6.4 % RSD (SL)	.1 ug/L
alpha-Picoline (109-06-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
Malononitrile (109-77-3)	N/A	N/A	0 % RSD (SL)	0 ug/L
trans-1,4-Dichloro-2-butene (110-57-6)	N/A	N/A	0 % RSD (SL)	0 ug/L
2-Chloroethylvinyl ether (110-75-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
Pyridine (110-86-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,2,4-Trichlorobenzene (120-82-1)	N/A	91 % Rec (SL)	17.6 % RSD (SL)	.5 ug/L
Paraldehyde (123-63-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
(E)-Crotonaldehyde (123-73-9)	N/A	N/A	N/A	
p-Dioxane (123-91-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
Dibromochloromethane (124-48-1)	N/A	99 % Rec (SL)	5.7 % RSD (SL)	.1 ug/L

Methacrylonitrile (126-98-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
Chloroprene (126-99-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
Tetrachloroethene (127-18-4)	N/A	96 % Rec (SL)	5.2 % RSD (SL)	.1 ug/L
sec-Butylbenzene (135-98-8)	N/A	110 % Rec (SL)	6.5 % RSD (SL)	.5 ug/L
Ethyl acetate (141-78-6)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,3-Dichloropropane (142-28-9)	N/A	99 % Rec (SL)	5.9 % RSD (SL)	.5 ug/L
Erythritol anhydride (1464-53-5)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,4-Dichloro-cis-2-butene (1476-11-5)	N/A	N/A	0 % RSD (SL)	0 ug/L
cis-1,2-Dichloroethene (156-59-2)	N/A	100 % Rec (SL)	3.7 % RSD (SL)	.1 ug/L
trans-1,2-Dichloroethene (156-60-5)	N/A	98 % Rec (SL)	7.3 % RSD (SL)	.1 ug/L
Chloral hydrate (302-17-0)	N/A	N/A	0 % RSD (SL)	0 ug/L
Crotonaldehyde (4170-30-3)	N/A	N/A	0 % RSD (SL)	0 ug/L
Sulfur mustard (505-60-2)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,3-Dichlorobenzene (541-73-1)	N/A	101 % Rec (SL)	5.9 % RSD (SL)	.1 ug/L
3-Chloropropionitrile (542-76-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
Carbon tetrachloride (56-23-5)	N/A	108 % Rec (SL)	6.3 % RSD (SL)	.1 ug/L
1,1-Dichloropropene	N/A	102 % Rec (SL)	7.3 % RSD (SL)	.5 ug/L

(563-58-6)				
Propiolactone (57-57-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
2-Hexanone (591-78-6)	N/A	N/A	0 % RSD (SL)	0 ug/L
sec-Dichloropropane (594-20-7)	N/A	99 % Rec (SL)	4.9 % RSD (SL)	.5 ug/L
Bromoacetone (598-31-2)	N/A	N/A	0 % RSD (SL)	0 ug/L
Diethyl ether (60-29-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,1,1,2-Tetrachloroethane (630-20-6)	N/A	100 % Rec (SL)	4.7 % RSD (SL)	.5 ug/L
Ethanol (64-17-5)	N/A	N/A	0 % RSD (SL)	0 ug/L
Methanol (67-56-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
Isopropanol (67-63-0)	N/A	N/A	0 % RSD (SL)	0 ug/L
Acetone (67-64-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
Chloroform (67-66-3)	N/A	105 % Rec (SL)	3 % RSD (SL)	.1 ug/L
Hexachloroethane (67-72-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
n-Propyl alcohol (71-23-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
n-Butyl alcohol (71-36-3)	N/A	N/A	0 % RSD (SL)	0 ug/L
Benzene (71-43-2)	N/A	99 % Rec (SL)	6.3 % RSD (SL)	.1 ug/L
1,1,1-Trichloroethane (71-55-6)	N/A	100 % Rec (SL)	4 % RSD (SL)	.5 ug/L

Bromomethane (74-83-9)	N/A	99 % Rec (SL)	7.2 % RSD (SL)	.5 ug/L
Chloromethane (74-87-3)	N/A	101 % Rec (SL)	4.7 % RSD (SL)	.5 ug/L
Iodomethane (74-88-4)	N/A	N/A	0 % RSD (SL)	0 ug/L
Dibromomethane (74-95-3)	N/A	93 % Rec (SL)	6 % RSD (SL)	.5 ug/L
Bromochloromethane (74-97-5)	N/A	97 % Rec (SL)	6 % RSD (SL)	.5 ug/L
Chloroethane (75-00-3)	N/A	100 % Rec (SL)	5.8 % RSD (SL)	.1 ug/L
Vinyl chloride (75-01-4)	N/A	104 % Rec (SL)	.2 % RSD (SL)	.1 ug/L
Acetonitrile (75-05-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
Methylene chloride (75-09-2)	N/A	97 % Rec (SL)	13.4 % RSD (SL)	.5 ug/L
Carbon disulfide (75-15-0)	N/A	N/A	0 % RSD (SL)	0 ug/L
Ethylene oxide (75-21-8)	N/A	N/A	0 % RSD (SL)	0 ug/L
Bromoform (75-25-2)	N/A	101 % Rec (SL)	5.3 % RSD (SL)	.5 ug/L
Bromodichloromethane (75-27-4)	N/A	100 % Rec (SL)	4.6 % RSD (SL)	.1 ug/L
1,1-Dichloroethane (75-34-3)	N/A	98 % Rec (SL)	6.3 % RSD (SL)	.5 ug/L
1,1-Dichloroethene (75-35-4)	N/A	95 % Rec (SL)	9.5 % RSD (SL)	.1 ug/L
Tert-Butyl Alcohol (75-65-0)	N/A	N/A	0 % RSD (SL)	0 ug/L
Trichlorofluoromethane	N/A	97 % Rec (SL)	4.7 % RSD (SL)	.1 ug/L

(75-69-4)				
Dichlorodifluoromethane (75-71-8)	N/A	99 % Rec (SL)	8.9 % RSD (SL)	.1 ug/L
Pentachloroethane (76-01-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
Isobutyl alcohol (78-83-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,2-Dichloropropane (78-87-5)	N/A	96 % Rec (SL)	6.3 % RSD (SL)	.5 ug/L
Methyl ethyl ketone (78-93-3)	N/A	N/A	0 % RSD (SL)	0 ug/L
Lactonitrile (78-97-7)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,1,2-Trichloroethane (79-00-5)	N/A	102 % Rec (SL)	4.8 % RSD (SL)	.5 ug/L
Trichloroethene (79-01-6)	N/A	104 % Rec (SL)	1.9 % RSD (SL)	.1 ug/L
1,1,2,2-Tetrachloroethane (79-34-5)	N/A	100 % Rec (SL)	12 % RSD (SL)	.5 ug/L
2-Nitropropane (79-46-9)	N/A	N/A	0 % RSD (SL)	0 ug/L
Methyl methacrylate (80-62-6)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,2,3-Trichlorobenzene (87-61-6)	N/A	102 % Rec (SL)	8.7 % RSD (SL)	.5 ug/L
Hexachlorobutadiene (87-68-3)	N/A	100 % Rec (SL)	6.7 % RSD (SL)	.5 ug/L
Naphthalene (91-20-3)	N/A	98 % Rec (SL)	7.3 % RSD (SL)	.5 ug/L
N-Nitrosodi-n-butylamine (924-16-3)	N/A	N/A	0 % RSD (SL)	0 ug/L
o-Xylene (95-47-6)	N/A	106 % Rec (SL)	7.1 % RSD (SL)	.5 ug/L

o-Chlorotoluene (95-49-8)	N/A	99 % Rec (SL)	4.6 % RSD (SL)	.5 ug/L
1,2-Dichlorobenzene (95-50-1)	N/A	97 % Rec (SL)	3.6 % RSD (SL)	.1 ug/L
o-Toluidine (95-53-4)	N/A	N/A	0 % RSD (SL)	0 ug/L
1,2,4-Trimethylbenzene (95-63-6)	N/A	96 % Rec (SL)	6.8 % RSD (SL)	.5 ug/L
DBCP (96-12-8)	N/A	92 % Rec (SL)	10.9 % RSD (SL)	.5 ug/L
1,2,3-Trichloropropane (96-18-4)	N/A	96 % Rec (SL)	6.8 % RSD (SL)	.5 ug/L
1,3-Dichloro-2-propanol (96-23-1)	N/A	N/A	0 % RSD (SL)	0 ug/L
Ethyl methacrylate (97-63-2)	N/A	N/A	0 % RSD (SL)	0 ug/L
tert-Butylbenzene (98-06-6)	N/A	110 % Rec (SL)	2.3 % RSD (SL)	.5 ug/L
Cumene (98-82-8)	N/A	102 % Rec (SL)	6.3 % RSD (SL)	.5 ug/L
Nitrobenzene (98-95-3)	N/A	N/A	0 % RSD (SL)	0 ug/L
p-Cymene (99-87-6)	N/A	113 % Rec (SL)	11.5 % RSD (SL)	.5 ug/L

export_analytes

Precision Descriptor Notes	See performance tables in method.
Detection Level Note	Detection limits using a variety of sample preparative methods are included.

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Method Summary

Method Source	**Standard Methods**
Method Number	2320 B
Revision Information	Standard Methods 21st Edition (2005); Standard Methods Online
Method Name	**Descriptive Name:** Alkalinity by Titration **Official Name:** 2320 B. Titration Method
Media	**Media:** WATER
Subcategory	Physical
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	Hydroxyl ions present in a sample as a result of dissociation or hydrolysis of solutes react with additions of standard acid. Alkalinity thus depends on the end-point pH used.
Scope and Application	Applicable to wastewater, surface waters, and drinking waters.
Applicable Concentration Range	
Interferences	Soaps, oily matter, suspended solids, or precipitates may coat the glass electrode and cause a sluggish response. Allow additional time between titrant additions to let electrode come to equilibrium or clean the electrodes occasionally. Do not filter, dilute, concentrate, or alter sample.
QC Requirements	See Section 2020 Quality Assurance/Quality Control.
Sample Handling	Collect samples in polyethylene or borosilicate glass bottles and store at a low temperature. Fill bottles completely and cap tightly. Because waste samples may be subject to microbial action and to loss or gain of CO2 or other gases when exposed to air, analyze samples without delay, preferably within 1 d. If biological activity is suspected analyze within 6 h.

	Avoid sample agitation and prolonged exposure to air.
Max Holding Time	14 days (regulatory)
Relative Cost/Effort	$51 to $200
Sample Prep Method(s)	

Method *Alkalinity by Titration* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Alkalinity (471-34-1)	N/A	.075 % Bias (ML)	5 SD (ML)	120 %

export_analytes

Precision Descriptor Notes	No general statement can be made about precision because of the great variation in sample characteristics. The precision of the titration is likely to be much greater than the uncertainties involved in sampling and sample handling before the analysis. Forty analysts in 17 laboratories analyzed synthetic samples containing increments of bicarbonate equivalent to 120 mg CaCO3/L. The titration procedure of 2320B.4.b was used, with an end point pH of 4.5. The standard deviation was 5 mg/L and the average bias (lower than the true value) was 9 mg/L. Sodium carbonate solutions equivalent to 80 and 65 mg CaCO3/L were analyzed by 12 laboratories according to the procedure of 2320B.4c. The standard deviations were 8 and 5 mg/L, respectively, with negligible bias. Four laboratories analyzed six samples having total alkalinities of about 1000 mg CaCO3/L and containing various ratios of carbonate/bicarbonate by the procedures of both 2320B.4a and c. The pooled standard deviation was 40 mg/L, with negligible difference between the procedures.
Detection Level Note	-

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Method Summary

Method Source	**Standard Methods**
Method Number	4500-H+B
Revision Information	Standard Methods Online
Method Name	**Descriptive Name:** pH in Water by Potentiometry **Official Name:** pH Value in Water by Potentiometry Using a Standard Hydrogen Electrode
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	Follow the manufacturer's instructions for pH meter and for storage and preparation of electrodes. Tap water is better than distilled water for storage of electrodes, but pH 4 buffer is best for the single glass electrode and saturated KCl is best for a calomel and Ag/AgCl reference electrode and a combination electrode. Keep electrodes wet with above solutions while pH meter is not in use. Remove electrode from storage solution, rinse, blot dry, and place in an initial buffer solution to set the isopotential point before use. Rinse, blot dry, and place in a second buffer that is within 2 pH units of the sample pH, and is at the same temperature as the sample. Record temperature and adjust the temperature dial on the meter. Remove electrode from the second buffer, rinse, blot dry, and place in a third buffer < pH 10 and within about 3 pH units from the second buffer. Meter response should be within 0.1 pH unit from the expected value. Above standardization adjusts the response of the glass electrode to the instrument. Standardize the instrument before each measurement when measuring only occasionally. Establish equilibrium between sample and electrode by stirring sample to homogeneity and stirring sample to release carbon dioxide. For samples of high ionic strength or those buffered, dip electrodes into the sample for 1 minute to condition, blot dry, immerse in a fresh aliquot of sample, and read pH. For dilute, poorly buffered samples, dip electrodes into 3 or 4 successive aliquots of the sample to equilibrate. Blot dry, immerse in a fresh aliquot of sample, and read pH.
Scope and Application	This method allows for determination of water pH.
Applicable Concentration	

Range	None given.
Interferences	(1) Sodium error may bias results at pH > 10 unless a "low sodium error" electrode is used. (2) Coatings of oily material can impair electrode. (3) Temperature effects.
QC Requirements	See Standard Methods Section 1020.
Sample Handling	Collect sample in a plastic or glass container. No preservation is needed. Analyze within 2 hours.
Max Holding Time	2 hours
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method *pH in Water by Potentiometry* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
pH (E-10139)	.001 pH	100 % Rec (ML)	.9 % RSD (ML)	5 pH

export_analytes

Precision Descriptor Notes	Precision and accuracy values were calculated using interlaboratory data from EPA-managed Water Pollution (WP) performance evaluation studies.
Detection Level Note	-

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Method Summary

Method Source	**Standard Methods**
Method Number	4500-NH3 B
Revision Information	Standard Methods 21st Edition (2005); Standard Methods Online
Method Name	**Descriptive Name:** Ammonia: Preliminary Distillation Step **Official Name:** 4500-NH3 B. Preliminary Distillation Step
Media	**Media:** WATER
Subcategory	Sampling/Preparation
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	The sample is buffered at pH 9.5 with a borate buffer to decrease hydrolysis of cyanates and organic nitrogen compounds. It is distilled into a solution of boric acid when titration is to be used or into H2SO4 when the phenate method is used. Ammonia in the distillate also can be ~ determined by the ammonia-selective electrode method, using 0.04N H2SO4 to trap the ammonia.
Scope and Application	The two major factors that influence selection of the method to determine ammonia are concentration and presence of interferences. In general, direct manual determination of low concentrations of ammonia is confined to drinking waters, clean surface or groundwater, and good-quality nitrified wastewater effluent. In other instances, and where interferences are present or greater precision is necessary, a preliminary distillation step is required.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	

	Most reliable results are obtained on fresh samples. If samples are to be analyzed within 24 h of collection, refrigerate unacidified at 4 degrees C. For preservation for up to 28 days, freeze at -20 degrees C unacidified, or preserve samples by acidifying to pH < 2 and storing at 4 degrees C. If acid preservation is used, neutralize samples with NaOH or KOH immediately before making the determination.
Max Holding Time	28 days (regulatory)
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method *Ammonia: Preliminary Distillation Step* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Ammonia (7664-41-7)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	-
Detection Level Note	-

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Method Summary

Method Source	**Standard Methods**
Method Number	4500-NH_3 B
Revision Information	Standard Methods 18th, 19th, 20th ed.
Method Name	**Descriptive Name:** Ammonia by Titration **Official Name:** 4500-NH_3 B. Preliminary Distillation Method
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Scope and Application	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	
Max Holding Time	

Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method Source	**Standard Methods**
Method Number	4500-NH_3 B
Revision Information	Standard Methods Online
Method Name	**Descriptive Name:** Ammonia by Titration **Official Name:** 4500-NH_3 B. Preliminary Distillation Method
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Scope and Application	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	
Max Holding Time	
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method *Ammonia by Titration* has 2 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Ammonia (7664-41-7)	N/A	N/A	N/A	
Total Kjeldahl nitrogen (E-10264)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Detection Level Note	-

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Method Summary

Method Source	**U.S. EPA National Exposure Research Laboratory (NERL) [formerly EMSL]**
Method Number	335.4
Revision Information	Revision 1.0, August 1993
Method Name	**Descriptive Name:** Cyanide, total, by Colorimetry **Official Name:** Determination of Total Cyanide by Semi-Automated Colorimetry
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100)**
Method Download	**Download full method now (PDF file)**
Summary of Method	The cyanide as hydrocyanic acid (HCN) is released from cyanide complexes by means of a reflux-distillation operation and is absorbed in a scrubber containing sodium hydroxide solution. The cyanide ion is determined using an automated colorimeter with pyridine-barbituric acid chemistry.
Scope and Application	This method is determines cyanide in drinking, surface and saline waters; and domestic and industrial wastes.
Applicable Concentration Range	0.005 to 0.5 mg/L
Interferences	(1) Oxidizing agents can destroy cyanides during storage. (2) Sulfide can complex with cyanide in sample or distillate. (3) Fatty acids cause interference during distillation. (4) Carbonate causes interference during distillation. (5) Aldehydes cause interference during distillation. (6) Nitrate/Nitrate causes interference during distillation (they can generate cyanides when combined with certain organic compounds). (7) Sulfur-containing compound causes interference during distillation by forming free sulfide that is captured in distillate.

QC Requirements	The minimum requirements consist of an initial demonstration of laboratory capability, the periodic analysis of laboratory reagent blanks, fortified blanks, and other laboratory solutions as a continuing check on performance.
Sample Handling	Test for and remove sulfides using lead acetate paper and cadmium carbonate, respectively. Test sample for the presence of oxidizing agents using KI-starch paper. If oxidizers are detected, add ascorbic acid until a drop test is negative. Preserve samples by adjusting to a pH > 12 with NaOH. Refrigerate samples at 4 degrees C until analysis. Analyze samples as soon as possible.
Max Holding Time	14 days
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method *Cyanide, total, by Colorimetry* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Cyanides (57-12-5)	.005 mg/L	N/A	N/A	

export_analytes

Precision Descriptor Notes	Data are available in the method.
Detection Level Note	None.

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Method Summary

Method Source	**U.S. EPA National Exposure Research Laboratory (NERL) [formerly EMSL]**
Method Number	350.1
Revision Information	Revision 2.0. August 1993
Method Name	**Descriptive Name:** Ammonia by Automated Colorimetry **Official Name:** Nitrogen, Ammonia (Colorimetric, Automated Phenate)
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100)**
Method Download	**Download full method now (PDF file)**
Summary of Method	Alkaline phenol and hypochlorite react with ammonia to form indophenol blue that is proportional to the ammonia concentration. The blue color is intensified with sodium nitroprusside.
Scope and Application	This method determines ammonia in drinking, surface, and saline waters; domestic and industrial wastes.
Applicable Concentration Range	0.01 - 2.0 mg/L (ammonia as N)
Interferences	(A) Calcium and Magnesium: Ions of these metals can cause errors by precipitating during analyses. Use EDTA solution (for river and industrial waters) or potassium tartrate solution (for sea water) to reduce this interference. (B) Turbidity: Sample turbidity should be removed by filtration. (C) Color: Color absorbing in the range of the indophenol blue complex can interfere.
QC Requirements	None.
Sample Handling	Cool to 4°C, add H_2SO_4 until sample pH < 2.

Max Holding Time	28 days (MCAWW, Table 1).
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	None.

Method *Ammonia by Automated Colorimetry* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Ammonia (7664-41-7)	.01 mg/L	101 % Rec (ML)	7 % RSD (ML)	

export_analytes

Precision Descriptor Notes	Precision and accuracy values were calculated using interlaboratory data from EPA-managed Water Pollution (WP) performance evaluation studies.
Detection Level Note	None.

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Method Summary

Method Source	**U.S. EPA National Exposure Research Laboratory (NERL) [formerly EMSL]**
Method Number	300.0
Revision Information	Revision 2.1, August 1993
Method Name	**Descriptive Name:** Inorganic Anions by Ion Chromatography **Official Name:** Determination of Inorganic Anions by Ion Chromatography
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Methods for the Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100)**
Method Download	**Download full method now (PDF file)**
Summary of Method	A small volume of sample, typically 50-100 uL, is introduced into an ion chromatograph. The anions of interest are separated and measured, using a system comprised of a guard column, separator column, suppressor device, and conductivity detector.
Scope and Application	Part A of the test method covers the determination of common inorganic anions in drinking water, surface water, mixed domestic and industrial wastewaters, groundwater, reagent waters, solids (after extraction), leachates (when no acetic acid is used). Part B of the test method covers the determination of bromate, chlorate, and chlorite in drinking and reagent waters.
Applicable Concentration Range	DL - * (* Upper detection limit is defined as the highest calibration point, as determined by analyst.)
Interferences	(1) Coeluting species (e.g., low-molecular-weight organic acids). (2) High concentration of anions can effect resolution of peaks and elution times. (3) Fluoride is especially sensitive to coeluting species, and "water dip" (corresponding to the elution of water) at low concentrations.
QC Requirements	Calibration Blank (CB), Quality Control Sample (QCS), Performance Evaluation Sample (PE),

	Instrument Performance Check Solution (IPC), Laboratory Duplicate (LD), Field Duplicate (FD), Laboratory Fortified Matrix (LFM), Laboratory Fortified Blank (LFB), Laboratory Reagent Blank (LRB), Linear Calibration Range (LCR)
Sample Handling	Collect enough volume to ensure a representative sample and to allow for replicates. Either glass or plastic bottles may be used. For Part A Analytes: No preservation is required for bromide, chloride, or fluoride. Refrigerate samples at 4 degrees C for nitrate-N, nitrite-N, orthophosphate-P, and sulfate. Samples being tested for nitrate/nitrite should be adjusted to pH < 2 with concentrated H_2SO4 and refrigerated at 4 degrees C until analysis. Analyze samples being tested for bromide, chloride, fluoride, nitrate/nitrite, and sulfate within 28 days. Analyze samples being tested for nitrate-N, nitrite-N, and orthophosphate-P within 48 hours. For Part B Analytes: Samples analyzed for bromate and chlorate may be held for 28 days without preservation. Chlorite should be analyzed for immediately (within 10 minutes). However, if the sample cannot be analyzed immediately, it may be preserved for up to 14 days if treated with ethylenediamine (ClO_2 should be removed prior to this step) and chilled to 4^oC.
Max Holding Time	Part A: 48 Hours (NO_2-N, NO_3-N, orthophosphate-P) 28 days (others) Part B: Bromate and Chlorate (28 days) and chlorite (14 days with preservation -- otherwise analyze immediately).
Relative Cost/Effort	$51 to $200
Sample Prep Method(s)	

Method *Inorganic Anions by Ion Chromatography* has 11 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Phosphate (14265-44-2)	.003 mg/L	99 % Rec (SL)	1.7 % RSD (SL)	10 mg/L
Nitrate (14797-55-8)	.002 mg/L	103 % Rec (SL)	2 % RSD (SL)	10 mg/L
Nitrite (14797-65-0)	.004 mg/L	97 % Rec (SL)	1.5 % RSD (SL)	10 mg/L
Sulfate (14808-79-8)	.02 mg/L	99 % Rec (SL)	2 % RSD (SL)	20 mg/L
Chlorate (14866-68-3)	.003 mg/L	110 % Rec (SL)	10 % RSD (SL)	.1 mg/L
Chlorite	.01 mg/L	94 % Rec (SL)	20 % RSD (SL)	.05 mg/L

(14998-27-7)				
Bromate (15541-45-4)	.02 mg/L	N/A	N/A	
Chloride (16887-00-6)	.02 mg/L	96 % Rec (SL)	2 % RSD (SL)	20 mg/L
Fluoride (16984-48-8)	.01 mg/L	91 % Rec (SL)	3 % RSD (SL)	2 mg/L
Bromide (24959-67-9)	.01 mg/L	99 % Rec (SL)	2 % RSD (SL)	5 mg/L
Nitrate/nitrite (E-10128)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	Precision and accuracy were obtained from a single operator study, analyzing 7 replicate reagent water samples. Additional precision and accuracy data, including data from different matrices, are available in the method.
Detection Level Note	Not explicitly described

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Method Summary

Method Source	**U.S. EPA National Exposure Research Laboratory (NERL) [formerly EMSL]**
Method Number	200.8
Revision Information	Revision 5.4, 1994
Method Name	**Descriptive Name:** Metals in Waters by ICP/MS **Official Name:** Determination of Trace Elements in Waters by Inductively Coupled Plasma - Mass Spectrometry
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Methods for the Determination of Metals in Environmental Samples, Supplement 1 (EPA/600/R-94/111)**
Method Download	**Download full method now (PDF file)**
Summary of Method	Except for the determination of dissolved analytes aqueous samples are acid preserved prior to sample processing. For the analysis of dissolved analytes, an acidified portion the filtrate is analyzed directly. For the determination of total-recoverable analytes in aqueous samples containing particulate material as well as solid type samples, samples are subjected to acid pretreatment with nitric and hydrochloric acids and gentle refluxing prior to analysis. The method involves multi-element determination by inductively coupled plasma-mass spectrometry. Sample solutions are pneumatically nebulized into a radio-frequency plasma where ionization occurs. The ions are extracted from the plasma through a differentially pumped vacuum interface and separated on the basis of their mass-to-charge ratio by a quadruple mass spectrometer. Separated ions are detected by an electron multiplier or Faraday detector and the ion information processed by a data handling system. Isobaric and polyatomic interferences relating to the technique must be recognized and corrected. Instrument drift and matrix effects must be corrected with the use of internal standards.
Scope and Application	This method determines 21 elements as dissolved elements in ground waters, surface waters, and drinking water, and total recoverable elements in these waters as well as wastewaters, sludges, and soils samples. Total-recoverable determination data should be reported as "total" (dissolved + suspended fractions) metal data. Organometalic compounds (such as arsenic compounds) are only determined as "total metals" and not as the individual organometalic compounds.

Applicable Concentration Range	The analytical range depends on the type of detector utilized (electron multiplier or Faraday cup) and extends from the laboratory determined MDL to the upper limit of the linear dynamic range.
Interferences	(1) Isobaric elemental interferences caused by isotopes of different elements which form singly or doubly charged ions of the same nominal mass-to-charge ratio and cannot be resolved by the mass spectrometer in use. (2) Signals from relatively abundant isotopes can coalesce at the wings of relatively less abundant isotopes leading to loss of resolution and poorer quantitation. (3) Isobaric polyatomic ion interferences are caused by ions consisting of more than one atom with the same nominal charge-to-mass ratio of the isotope of interest. (4) Physical interferences that hinder transport of the sample into the plasma (e.g., viscosity effects, high levels of solids). (5) Memory interferences (carry-over) of isotopes from previous sample runs.
QC Requirements	Calibration Blanks (CBs), Laboratory Reagent Blanks (LRBs), Laboratory Duplicates (LDs), Laboratory Fortified Sample Matrix (LFM), Quality Control Samples (QCSs)
Sample Handling	For dissolved elements, filter aqueous sample through a 0.45-um pore membrane filter. Adjust the pH of the filtrate to < 2 with HNO_3. For total recoverable elements, adjust the pH of the aqueous sample to < 2 with HNO_3.
Max Holding Time	6 months (All metals except Hg - 28 days)
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	

Method *Metals in Waters by ICP/MS* has 22 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Aluminum (7429-90-5)	1 ug/L	125.1 % Rec (ML)	17.4 % RSD (ML)	8 ug/L
Lead (7439-92-1)	.6 ug/L	100 % Rec (ML)	40.5 % RSD (ML)	4 ug/L
Manganese (7439-96-5)	.1 ug/L	107.5 % Rec (ML)	10.5 % RSD (ML)	.8 ug/L
Mercury (7439-97-6)	.2 ug/L	86 % Rec (SL)	13 % RSD (SL)	1 ug/L
Molybdenum (7439-98-7)	.3 ug/L	93.9 % Rec (ML)	6.1 % RSD (ML)	2.8 ug/L

Nickel (7440-02-0)	.5 ug/L	101 % Rec (ML)	12.5 % RSD (ML)	4 ug/L
Silver (7440-22-4)	.1 ug/L	116.25 % Rec (ML)	15.1 % RSD (ML)	.8 ug/L
Thallium (7440-28-0)	.3 ug/L	103.2 % Rec (ML)	7.6 % RSD (ML)	2.8 ug/L
Thorium-232 (7440-29-1)	.1 ug/L	116.25 % Rec (ML)	9.7 % RSD (ML)	.8 ug/L
Antimony (7440-36-0)	.4 ug/L	98.2 % Rec (ML)	9.8 % RSD (ML)	2.8 ug/L
Arsenic (7440-38-2)	1.4 ug/L	108 % Rec (ML)	35 % RSD (ML)	8 ug/L
Barium (7440-39-3)	.8 ug/L	94.6 % Rec (ML)	6.3 % RSD (ML)	8.01 ug/L
Beryllium (7440-41-7)	.3 ug/L	118.2 % Rec (ML)	7.9 % RSD (ML)	2.8 ug/L
Cadmium (7440-43-9)	.5 ug/L	100 % Rec (ML)	5 % RSD (ML)	4 ug/L
Chromium (7440-47-3)	.9 ug/L	103.3 % Rec (ML)	18.6 % RSD (ML)	8 ug/L
Cobalt (7440-48-4)	.09 ug/L	110 % Rec (ML)	5.7 % RSD (ML)	.8 ug/L
Copper (7440-50-8)	.5 ug/L	97 % Rec (ML)	15.2 % RSD (ML)	4 ug/L
Uranium-238 (7440-61-1)	.1 ug/L	107.5 % Rec (ML)	10 % RSD (ML)	.8 ug/L
Vanadium (7440-62-2)	2.5 ug/L	96.9 % Rec (ML)	6.8 % RSD (ML)	32 ug/L
Zinc (7440-66-6)	1.8 ug/L	104 % Rec (ML)	22.25 % RSD (ML)	8 ug/L
Selenium (7782-49-2)	7.9 ug/L	104.8 % Rec (ML)	4.7 % RSD (ML)	32 ug/L
Sodium arsenite	N/A	N/A	N/A	

(7784-46-5)				

export_analytes

Precision Descriptor Notes	Data (excluding that for mercury) was from joint EPA-AOAC 13-laboratory round robin validation. The precision and accuracy values presented are based on analyses of spiked reagent water samples. However, the method contains multilaboratory data and regression equations for metals analyses in drinking water, and ground water, and reagent water, as well supplemental single-laboratory data in a variety of matrices and media. NOTE: Mercury data was based on analyses of 3 drinking water samples fortified with mercury. One sample had background concentration above the MDL (0.23).
Detection Level Note	(1) Instrument detection limits (3-sigma) estimated from seven-replicate integrations of the blank (1% v/v nitric acid) following calibration of the instrument with three replicate integrations of a multi-element standard. (2) IDLs were estimated from single-laboratory, reagent water data.

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Method Summary

Method Source	**Standard Methods**
Method Number	2540 C
Revision Information	Standard Methods 18th, 19th, 20th ed.
Method Name	**Descriptive Name:** Total Dissolved Solids Dried at 180°C **Official Name:** Solids in Water
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Scope and Application	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	
Max Holding Time	

Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method Source	**Standard Methods**
Method Number	2540 C
Revision Information	Standard Methods Online
Method Name	**Descriptive Name:** Total Dissolved Solids Dried at 180°C **Official Name:** Solids in Water
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Scope and Application	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	
Max Holding Time	
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method *Total Dissolved Solids Dried at 180^oC* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Solids, dissolved, residue on evaporation, 180deg C (N-55561)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Detection Level Note	-

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Method Summary

Method Source	**Standard Methods**
Method Number	2540 D
Revision Information	Standard Methods 18th, 19th, 20th ed.
Method Name	**Descriptive Name:** Total Suspended Solids Dried at 103-105°C **Official Name:** Solids in Water
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Scope and Application	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	
Max Holding Time	

Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method Source	**Standard Methods**
Method Number	2540 D
Revision Information	Standard Methods Online
Method Name	**Descriptive Name:** Total Suspended Solids Dried at 103-105°C **Official Name:** Solids in Water
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Standard Methods Online - Standard Methods for the Examination of Water and Wastewater**
Method Download	This is a proprietary method. **Please visit the method owner's site for method documentation**
Summary of Method	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Scope and Application	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Applicable Concentration Range	
Interferences	
QC Requirements	
Sample Handling	
Max Holding Time	
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method *Total Suspended Solids Dried at 103-105^oC* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Total Suspended Solids (E-10162)	N/A	N/A	N/A	

export_analytes

Precision Descriptor Notes	This method is included in NEMI for informational purposes as it is approved by EPA for regulatory use. Detailed information on this method is not currently available in NEMI; refer to Standard Methods (www.standardmethods.org) for the most current method information.
Detection Level Note	-

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Method Summary

Method Source	**U.S. EPA National Exposure Research Laboratory (NERL) [formerly EMSL]**
Method Number	245.1
Revision Information	Revision 3.0, 1994
Method Name	**Descriptive Name:** Mercury by CVAA **Official Name:** Mercury (Manual Cold Vapor Technique)
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Methods for the Determination of Metals in Environmental Samples, Supplement 1 (EPA/600/R-94/111)**
Method Download	**Download full method now (PDF file)**
Summary of Method	A sample is digested in a glass bottle for 2 hours with a persulfate/permanganate solution under heating. After digestion, the mercury in the sample is reduced to its elemental form with stannous chloride. The concentration of mercury in the sample is determined using a cold vapor atomic absorption (CVAA) spectrometer system.
Scope and Application	This method allows for determination of total mercury in drinking, surface, ground, sea, and brackish waters, and industrial and domestic wastewaters.
Applicable Concentration Range	above 0.2 ug/L
Interferences	(A) Ions and metals: Sulfide, chloride, copper, and tellurium are reported interferences. (B) Volatile materials: Chlorine and other volatile compounds which absorb in the range of mercury should be purged from the head space of the digestion vessel before the addition of stannous chloride.
QC Requirements	Quality control requirements include an initial demonstration of laboratory capability through analysis of laboratory reagent blanks (LRB), fortified blanks (LFB), quality control samples (QCS), and an MDL study. Ongoing quality control checks include analysis of laboratory

	fortified matrices (LFM), (laboratory reagent blanks) LRB, and instrument performance check (IPC) samples.
Sample Handling	For total mercury, preserve samples with (1+1) nitric acid, and hold for 16 hours at a pH < 2 prior to analysis. Samples may be preserved in the field or upon receipt at the laboratory (the latter may minimize the chance of contamination). Use extreme care to minimize sample contamination by checking equipment, and avoiding exposure of the sample to airborne mercury in the laboratory.
Max Holding Time	28 days.
Relative Cost/Effort	$51 to $200
Sample Prep Method(s)	

Method *Mercury by CVAA* has 1 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Mercury (7439-97-6)	.2 ug/L	166 % Rec (ML)	89 % RSD (ML)	.21 ug/L

export_analytes

Precision Descriptor Notes	Precision and accuracy values calculated from interlaboratory data collected at 76 laboratories as part of EPA's method performance studies. Additional data are available in the method.
Detection Level Note	DL is taken as lowest point of the effective range.

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Method Summary

Method Source	**U.S. EPA National Exposure Research Laboratory (NERL) [formerly EMSL]**
Method Number	200.7
Revision Information	Revision 4.4, 1994
Method Name	**Descriptive Name:** Metals in Water by ICP-AES **Official Name:** Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry
Media	**Media:** WATER
Subcategory	Inorganic
Citation	**Methods for the Determination of Metals in Environmental Samples, Supplement 1 (EPA/600/R-94/111)**
Method Download	**Download full method now (PDF file)**
Summary of Method	Except for the determination of dissolved analytes, aqueous samples are acid preserved prior to sample processing. For the analysis of dissolved analytes, an acidified portion of the filtrate is analyzed directly. For the determination of total recoverable analytes in aqueous samples containing particulate material as well as solid wastes, samples are subjected to acid pretreatment with nitric and hydrochloric acids and gentle refluxing prior to analysis. The method involves multi-element determination using sequential or simultaneous instruments. The instruments measure characteristic atomic-line emission spectra by optical spectrometry. Sample solutions are nebulized and the resulting aerosol is transported to the plasma torch. Element specific emission spectra are produced by a radio-frequency inductively coupled plasma. The spectra are dispersed by a grating spectrometer and the intensities of the lines are monitored at specific wavelengths by a photosensitive device. Photocurrents from the photosensitive device are processed and controlled by a computer system. A background correction technique is required to compensate for variable background contribution to the determination of the analytes. Background must be measured adjacent to analyte lines on samples during analysis. Various interferences are discussed and must be considered and addressed appropriately.
Scope and Application	This method determines 31 analytes, in the dissolved fraction of aqueous samples and for the measurement of total-recoverable analytes in water, wastewater, and solid wastes. Total-recoverable determination data for aqueous samples should be reported as total (dissolved + suspended fractions) metal data.

Applicable Concentration Range	Unless otherwise noted, the analytical range extends from the laboratory-determined MDL to the upper limit of the linear dynamic range.
Interferences	I. SPECTRAL INTERFERENCES: (1) Background emmission or stray light. (2) Spectral overlap of emissions. II. PHYSICAL INTERFERENCES: High viscosity or high particulate levels of sample can clog nebulizer. III. CHEMICAL INTERFERENCES: (1) Compound formation. (2) Ionization. (3) Solute-vaporization. IV. MEMORY INTERFERENCES: Carry-over from sample.
QC Requirements	The minimum QC requirements consist of an initial demonstration of laboratory capability and on-going checks. The initial demonstration includes determining the linear dynamic range (LDR) for each wavelength utilized, determining the method detection limit (MDL) for each analyte, and analyzing a quality control sample (QCS). On-going checks include periodic analysis of laboratory reagent blanks (LRB), laboratory fortified blanks (LFB), instrument performance check solutions (IPC), calibration blanks (CB), spectral interference check solutions (SIC), and laboratory fortified matrices (LFM).
Sample Handling	For dissolved elements, filter aqueous sample through a 0.45-um pore membrane filter. Adjust the pH of the filtrate to < 2 with (1+1) HNO_3. For total recoverable elements, adjust the pH of the sample to < 2 with (1+1)HNO_3. When determining boron and silica in aqueous samples, only plastic, polytetrafluoroethylene (PTFE) or quartz labware is used from time of sample collection to completion of analysis. If acid preservation in the field is not feasabile, preservation may take place at the laboratory if the sample is received by the laboratory within two weeks and is acidified at pH < 2 for 16 hours.
Max Holding Time	6 Months
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	

Method *Metals in Water by ICP-AES* has 31 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Aluminum (7429-90-5)	20 ug/L	105 % Rec (ML)	24 % RSD (ML)	200 ug/L
Iron (7439-89-6)	30 ug/L	110 % Rec (ML)	34 % RSD (ML)	50 ug/L
Lead (7439-92-1)	10 ug/L	109 % Rec (ML)	16 % RSD (ML)	50 ug/L
Lithium	1 ug/L	N/A	N/A	

(7439-93-2)				
Magnesium (7439-95-4)	20 ug/L	103 % Rec (ML)	31 % RSD (ML)	50 ug/L
Manganese (7439-96-5)	1 ug/L	98 % Rec (ML)	13 % RSD (ML)	10 ug/L
Mercury (7439-97-6)	7 ug/L	N/A	N/A	
Molybdenum (7439-98-7)	4 ug/L	86 % Rec (ML)	30 % RSD (ML)	20 ug/L
Nickel (7440-02-0)	5 ug/L	106 % Rec (ML)	31 % RSD (ML)	20 ug/L
Potassium (7440-09-7)	.3 mg/L	57 % Rec (ML)	67 % RSD (ML)	.5 mg/L
Silver (7440-22-4)	2 ug/L	48 % Rec (ML)	47 % RSD (ML)	100 ug/L
Sodium (7440-23-5)	30 ug/L	119 % Rec (ML)	26 % RSD (ML)	200 ug/L
Strontium (7440-24-6)	.3 ug/L	N/A	N/A	
Thallium (7440-28-0)	1 ug/L	96 % Rec (ML)	25 % RSD (ML)	200 ug/L
Tin (7440-31-5)	7 ug/L	N/A	N/A	
Antimony (7440-36-0)	8 ug/L	90 % Rec (ML)	19 % RSD (ML)	100 ug/L
Arsenic (7440-38-2)	8 ug/L	106 % Rec (ML)	19 % RSD (ML)	100 ug/L
Barium (7440-39-3)	1 ug/L	92 % Rec (ML)	27 % RSD (ML)	20 ug/L
Beryllium (7440-41-7)	.3 ug/L	91 % Rec (ML)	23 % RSD (ML)	5 ug/L
Boron (7440-42-8)	3 ug/L	115 % Rec (ML)	27 % RSD (ML)	100 ug/L

Cadmium (7440-43-9)	1 ug/L	98 % Rec (ML)	12 % RSD (ML)	20 ug/L
Cerium (7440-45-1)	20 ug/L	N/A	N/A	
Chromium (7440-47-3)	4 ug/L	94 % Rec (ML)	22 % RSD (ML)	20 ug/L
Cobalt (7440-48-4)	2 ug/L	85 % Rec (ML)	20 % RSD (ML)	20 ug/L
Copper (7440-50-8)	3 ug/L	60 % Rec (ML)	43 % RSD (ML)	10 ug/L
Vanadium (7440-62-2)	3 ug/L	98 % Rec (ML)	17 % RSD (ML)	20 ug/L
Zinc (7440-66-6)	2 ug/L	99 % Rec (ML)	19 % RSD (ML)	50 ug/L
Calcium (7440-70-2)	10 ug/L	98 % Rec (ML)	23 % RSD (ML)	50 ug/L
Silica (7631-86-9)	20 ug/L	67 % Rec (ML)	67 % RSD (ML)	200 ug/L
Phosphorus (7723-14-0)	60 ug/L	N/A	N/A	
Selenium (7782-49-2)	20 ug/L	96 % Rec (ML)	23 % RSD (ML)	100 ug/L

export_analytes

Precision Descriptor Notes	Data collected from an interlaboratory study conducted using EPA Method 200.7. See: Maxfield, R. & B. Mindax. 1985. EPA Method Study 27, Method 200.7 (Trace Metals by ICP). EPA-600/S4-85/05. National Technical Information Service, Springfield, Va.
Detection Level Note	The EDLs are estimated 3-sigma instrumental detection limits that were described in "EPA Method Study 27, Method 200.7 Trace Metals by ICP" [November 1983] (Available from National Technical Information Service as PB 85-248-656).

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	8270D
Revision Information	Revision 4.0, January 1998
Method Name	**Descriptive Name:** Semivolatile Organic Compounds by GC/MS **Official Name:** Semivolatile Organic Compounds by GC/MS
Media	**Media:** VARIOUS
Subcategory	Organic
Citation	**SW-846 Update IVA**
Method Download	**Download full method now (PDF file)**
Summary of Method	The samples are prepared for analysis by gas chromatography/mass spectrometry (GC/MS) using the appropriate sample preparation (refer to Method 3500) and, if necessary, sample cleanup procedures (refer to Method 3600). The semivolatile compounds are introduced into the GC/MS by injecting the sample extract into a gas chromatograph (GC) with a narrow-bore fused-silica capillary column. The GC column is temperature-programmed to separate the analytes, which are then detected with a mass spectrometer (MS) connected to the gas chromatograph. Analytes eluted from the capillary column are introduced into the mass spectrometer via a jet separator or a direct connection. Identification of target analytes is accomplished by comparing their mass spectra with the electron impact (or electron impact-like) spectra of authentic standards. Quantitation is accomplished by comparing the response of a major (quantitation) ion relative to an internal standard using a five-point calibration curve. NOTE: This method can be used in conjunction with the following sample preparation procedures: Air (particulates and sorbent resin)- Method 3542 Water (including TCLP leachates) - Methods 3510, 3520, 3535 Soil/sediment - Methods 3540, 3541, 3545, 3546 3550, 3560, 3561 Waste - Methods 3540, 3541, 3545, 3546, 3550, 3560, 3561, 3580
Scope and Application	Method 8270 is used to determine the concentration of semivolatile organic compounds in extracts prepared from many types of solid waste matrices, soils, air sampling media and water samples. Direct injection of a sample may be used in limited applications.

Applicable Concentration Range	None given.
Interferences	(1) Contaminants from glassware. (2) Matrix interferences that are co-extracted with sample. (3) Contamination by carryover can occur whenever high-concentration and low-concentration samples are sequentially analyzed. To reduce carryover, the sample syringe must be rinsed with solvent between sample injections. Whenever an unusually concentrated sample is encountered, it should be followed by the analysis of solvent to check for cross-contamination.
QC Requirements	See SW-846 Method 8000 and 3500. Procedures include: validation of sample preparation, introduction, and analysis, initial demonstration of proficiency, calibration verification, evaluation of retention times, analysis of method blanks, matrix spikes, duplicates, surrogates, and laboratory control samples.
Sample Handling	Store the extract at 4 degrees C, protected from light in screw-cap vials equipped with unpierced Teflon lined septa. See SW-846, Chapter 4, Organic Analytes, Section 4.1. See SW-846 Chapter Four for information.
Max Holding Time	Aqueous samples - 7 days (sample), 40 days (extract). Solid samples - 14 days (sample), 40 (extract). Also, see SW-846 Chapter Four for information.
Relative Cost/Effort	$201 to $400
Sample Prep Method(s)	See Method Summary

Method *Semivolatile Organic Compounds by GC/MS* has 242 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
p-Nitroaniline (100-01-6)	20 ug/L	N/A	N/A	
4-Nitrophenol (100-02-7)	10 ug/L	58.56 % Rec (ML)	50.48 % RSD (ML)	50 ug/L
1,4-Dinitrobenzene (100-25-4)	40 ug/L	N/A	N/A	
Benzyl alcohol (100-51-6)	20 ug/L	N/A	N/A	
N-Nitrosopiperidine (100-75-4)	20 ug/L	N/A	N/A	
Anilazine (101-05-3)	100 ug/L	N/A	N/A	

4,4'-Methylenebis(2-chloroaniline) (101-14-4)	N/A	N/A	N/A	
Barban (101-27-9)	200 ug/L	N/A	N/A	
4-Bromophenyl phenyl ether (101-55-3)	10 ug/L	88.32 % Rec (ML)	17.32 % RSD (ML)	50 ug/L
4,4'-Methylenebis(N,N-dimethyl) benzenamine (101-61-1)	N/A	N/A	N/A	
4,4'-Oxydianiline (101-80-4)	20 ug/L	N/A	N/A	
Heptachlor epoxide (1024-57-3)	N/A	88.26 % Rec (ML)	29.28 % RSD (ML)	50 ug/L
Endosulfan sulfate (1031-07-8)	N/A	41.05 % Rec (ML)	57.85 % RSD (ML)	20 ug/L
2,4-Dimethylphenol (105-67-9)	10 ug/L	79.82 % Rec (ML)	24.62 % RSD (ML)	50 ug/L
N-Nitrosomethylethylamine (10595-95-6)	N/A	N/A	N/A	
p-Cresol (106-44-5)	N/A	N/A	N/A	
1,4-Dichlorobenzene (106-46-7)	10 ug/L	70.06 % Rec (ML)	29.72 % RSD (ML)	50 ug/L
p-Chloroaniline (106-47-8)	20 ug/L	N/A	N/A	
p-Phenylenediamine (106-50-3)	N/A	N/A	N/A	
p-Benzoquinone (106-51-4)	10 ug/L	N/A	N/A	
Tetraethyl pyrophosphate (107-49-3)	40 ug/L	N/A	N/A	
Maleic anhydride (108-31-6)	N/A	N/A	N/A	

m-Cresol (108-39-4)	N/A	N/A	N/A	
Resorcinol (108-46-3)	100 ug/L	N/A	N/A	
bis(2-Chloroisopropyl) ether (108-60-1)	10 ug/L	98.38 % Rec (ML)	27.08 % RSD (ML)	50 ug/L
Phenol (108-95-2)	10 ug/L	45.52 % Rec (ML)	36.16 % RSD (ML)	50 ug/L
Benzenethiol (108-98-5)	N/A	N/A	N/A	
alpha-Picoline (109-06-8)	N/A	N/A	N/A	
Pyridine (110-86-1)	N/A	N/A	N/A	
PCB-1260 (11096-82-5)	N/A	59.28 % Rec (ML)	46.64 % RSD (ML)	50 ug/L
PCB-1254 (11097-69-1)	N/A	N/A	N/A	
PCB-1221 (11104-28-2)	N/A	N/A	N/A	
PCB-1232 (11141-16-5)	N/A	N/A	N/A	
bis(2-Chloroethyl) ether (111-44-4)	10 ug/L	82.92 % Rec (ML)	35.2 % RSD (ML)	50 ug/L
bis(2-Chloroethoxy)methane (111-91-1)	10 ug/L	101.92 % Rec (ML)	30.02 % RSD (ML)	50 ug/L
Fensulfothion (115-90-2)	40 ug/L	N/A	N/A	
2-Aminoanthraquinone (117-79-3)	20 ug/L	N/A	N/A	
Dichlone (117-80-6)	N/A	N/A	N/A	
bis(2-Ethylhexyl) phthalate	N/A	81.64 % Rec	37.34 % RSD	50 ug/L

(117-81-7)		(ML)	(ML)	
Di-n-octyl phthalate (117-84-0)	10 ug/L	74.42 % Rec (ML)	39.38 % RSD (ML)	50 ug/L
Hexachlorobenzene (118-74-1)	10 ug/L	75.32 % Rec (ML)	41.96 % RSD (ML)	50 ug/L
3,3'-Dimethoxybenzidine (119-90-4)	100 ug/L	N/A	N/A	
o-Tolidine (119-93-7)	N/A	N/A	N/A	
Anthracene (120-12-7)	N/A	81.36 % Rec (ML)	25.72 % RSD (ML)	50 ug/L
Isosafrole (120-58-1)	10 ug/L	N/A	N/A	
Piperonyl sulfoxide (120-62-7)	100 ug/L	N/A	N/A	
p-Cresidine (120-71-8)	10 ug/L	N/A	N/A	
1,2,4-Trichlorobenzene (120-82-1)	10 ug/L	92.42 % Rec (ML)	21.78 % RSD (ML)	50 ug/L
2,4-Dichlorophenol (120-83-2)	10 ug/L	87.26 % Rec (ML)	23.56 % RSD (ML)	50 ug/L
2,4-Dinitrotoluene (121-14-2)	10 ug/L	82.38 % Rec (ML)	24 % RSD (ML)	50 ug/L
Malathion (121-75-5)	50 ug/L	N/A	N/A	
Phentermine (122-09-8)	N/A	N/A	N/A	
Diphenylamine (122-39-4)	N/A	N/A	N/A	
1,2-Diphenylhydrazine (122-66-7)	N/A	N/A	N/A	
Hydroquinone (123-31-9)	N/A	N/A	N/A	

O,O,O-Triethylphosphorothioate (126-68-1)	N/A	N/A	N/A	
PCB-1248 (12672-29-6)	N/A	N/A	N/A	
Tris(2,3-dibromopropyl)phosphate (126-72-7)	200 ug/L	N/A	N/A	
PCB-1016 (12674-11-2)	N/A	N/A	N/A	
Demeton-S (126-75-0)	10 ug/L	N/A	N/A	
Pyrene (129-00-0)	10 ug/L	83.68 % Rec (ML)	15.62 % RSD (ML)	50 ug/L
1,4-Naphthoquinone (130-15-4)	10 ug/L	N/A	N/A	
Terbufos (13071-79-9)	20 ug/L	N/A	N/A	
Dimethyl phthalate (131-11-3)	10 ug/L	30.3 % Rec (ML)	95.8 % RSD (ML)	10 ug/L
Phosphamidon (13171-21-6)	100 ug/L	N/A	N/A	
Dinex (131-89-5)	N/A	N/A	N/A	
3-Amino-9-ethyl carbazole (132-32-1)	N/A	N/A	N/A	
Dibenzofuran (132-64-9)	10 ug/L	N/A	N/A	
Captan (133-06-2)	50 ug/L	N/A	N/A	
alpha-Naphthylamine (134-32-7)	N/A	N/A	N/A	
2,4,5-Trimethylaniline (137-17-7)	10 ug/L	N/A	N/A	
Aramite	20 ug/L	N/A	N/A	

(140-57-8)				
Dicrotophos (141-66-2)	10 ug/L	N/A	N/A	
Kepone (143-50-0)	20 ug/L	N/A	N/A	
Octamethylpyrophosphoramide (152-16-9)	200 ug/L	N/A	N/A	
Carbofuran (1563-66-2)	10 ug/L	N/A	N/A	
Trifluralin (1582-09-8)	10 ug/L	N/A	N/A	
Bromoxynil (1689-84-5)	10 ug/L	N/A	N/A	
Nitrofen (1836-75-5)	20 ug/L	N/A	N/A	
Hexachloropropene (1888-71-7)	10 ug/L	N/A	N/A	
Benzo(g,h,i)perylene (191-24-2)	10 ug/L	96.28 % Rec (ML)	50.12 % RSD (ML)	50 ug/L
Dibenzo(a,e)pyrene (192-65-4)	10 ug/L	N/A	N/A	
Indeno(1,2,3-cd)pyrene (193-39-5)	10 ug/L	71.8 % Rec (ML)	50.88 % RSD (ML)	50 ug/L
Benzo(b)fluoranthene (205-99-2)	10 ug/L	89.4 % Rec (ML)	30.92 % RSD (ML)	50 ug/L
Fluoranthene (206-44-0)	10 ug/L	83.2 % Rec (ML)	26.8 % RSD (ML)	50 ug/L
Benzo(k)fluoranthene (207-08-9)	10 ug/L	83.88 % Rec (ML)	35.8 % RSD (ML)	50 ug/L
Acenaphthylene (208-96-8)	10 ug/L	90.48 % Rec (ML)	24.92 % RSD (ML)	50 ug/L
EPN (2104-64-5)	10 ug/L	N/A	N/A	

Leptophos (21609-90-5)	10 ug/L	N/A	N/A	
Chrysene (218-01-9)	10 ug/L	91 % Rec (ML)	32.82 % RSD (ML)	50 ug/L
Tetrachlorvinphos (22248-79-9)	20 ug/L	N/A	N/A	
Dibenz(a,j)acridine (224-42-0)	10 ug/L	N/A	N/A	
Diallate (2303-16-4)	10 ug/L	N/A	N/A	
Phosalone (2310-17-0)	100 ug/L	N/A	N/A	
Mirex (2385-85-5)	10 ug/L	N/A	N/A	
Pronamide (23950-58-5)	10 ug/L	N/A	N/A	
Zinophos (297-97-2)	N/A	N/A	N/A	
Methyl parathion (298-00-0)	10 ug/L	N/A	N/A	
Phorate (298-02-2)	10 ug/L	N/A	N/A	
Demeton-O (298-03-3)	10 ug/L	N/A	N/A	
Disulfoton (298-04-4)	10 ug/L	N/A	N/A	
Naled (300-76-5)	20 ug/L	N/A	N/A	
Aldrin (309-00-2)	N/A	81.32 % Rec (ML)	45.26 % RSD (ML)	50 ug/L
Mexacarbate (315-18-4)	20 ug/L	N/A	N/A	
alpha-BHC	N/A	N/A	N/A	

(319-84-6)				
beta-BHC (319-85-7)	N/A	85.12 % Rec (ML)	26.12 % RSD (ML)	50 ug/L
delta-BHC (319-86-8)	N/A	26.82 % Rec (ML)	92.66 % RSD (ML)	50 ug/L
Endosulfan-II (33213-65-9)	N/A	N/A	N/A	
Fluchloralin (33245-39-5)	20 ug/L	N/A	N/A	
Sulfotepp (3689-24-5)	N/A	N/A	N/A	
Dinocap (39300-45-3)	100 ug/L	N/A	N/A	
Isodrin (465-73-6)	20 ug/L	N/A	N/A	
Chlorfenvinphos (470-90-6)	20 ug/L	N/A	N/A	
Phenobarbitol (50-06-6)	10 ug/L	N/A	N/A	
p,p'-DDT (50-29-3)	N/A	72.44 % Rec (ML)	63.84 % RSD (ML)	50 ug/L
Benzo(a)pyrene (50-32-8)	N/A	89.74 % Rec (ML)	34.7 % RSD (ML)	50 ug/L
Chlorobenzilate (510-15-6)	10 ug/L	N/A	N/A	
Trimethylphosphate (512-56-1)	10 ug/L	N/A	N/A	
2,4-Dinitrophenol (51-28-5)	50 ug/L	44.92 % Rec (ML)	94.58 % RSD (ML)	50 ug/L
4-Chloro-m-phenylenediamine (5131-60-2)	N/A	N/A	N/A	
Propylthiouracil (51-52-5)	100 ug/L	N/A	N/A	

Urethane (51-79-6)	N/A	N/A	N/A	
1,2-Dinitrobenzene (528-29-0)	40 ug/L	N/A	N/A	
Famphur (52-85-7)	20 ug/L	N/A	N/A	
2-Methyl-4,6-dinitrophenol (534-52-1)	N/A	N/A	N/A	
PCB-1242 (53469-21-9)	N/A	N/A	N/A	
Endrin ketone (53494-70-5)	N/A	N/A	N/A	
Dibenzo(a,h)anthracene (53-70-3)	N/A	97.44 % Rec (ML)	59.5 % RSD (ML)	50 ug/L
HN-1 (538-07-8)	N/A	N/A	N/A	
Acetamidofluorene (53-96-3)	20 ug/L	N/A	N/A	
Nicotine (54-11-5)	20 ug/L	N/A	N/A	
1,3-Dichlorobenzene (541-73-1)	10 ug/L	84.6 % Rec (ML)	41.22 % RSD (ML)	50 ug/L
N-Nitrosodiethylamine (55-18-5)	20 ug/L	N/A	N/A	
Fenthion (55-38-9)	10 ug/L	N/A	N/A	
HN-3 (555-77-1)	N/A	N/A	N/A	
Ethion (563-12-2)	10 ug/L	N/A	N/A	
Ethyl parathion (56-38-2)	10 ug/L	N/A	N/A	
3-Methylcholanthrene	10 ug/L	N/A	N/A	

(56-49-5)				
Diethylstilbestrol (56-53-1)	20 ug/L	N/A	N/A	
Benzo(a)anthracene (56-55-3)	10 ug/L	86.8 % Rec (ML)	25.44 % RSD (ML)	50 ug/L
4-Nitroquinoline-1-oxide (56-57-5)	40 ug/L	N/A	N/A	
Coumaphos (56-72-4)	40 ug/L	N/A	N/A	
Strychnine (57-24-9)	40 ug/L	N/A	N/A	
Dilantin (57-41-0)	N/A	N/A	N/A	
Chlordane (57-74-9)	N/A	N/A	N/A	
7,12-Dimethylbenz(a)anthracene (57-97-6)	10 ug/L	N/A	N/A	
Toluene-2,4-diisocyanate (584-84-9)	N/A	N/A	N/A	
Lindane (58-89-9)	N/A	N/A	N/A	
2,3,4,6-Tetrachlorophenol (58-90-2)	10 ug/L	N/A	N/A	
1-Acetyl-2-thiourea (591-08-2)	1000 ug/L	N/A	N/A	
4-Chloro-3-methylphenol (59-50-7)	N/A	N/A	N/A	
N-Nitrosomorpholine (59-89-2)	N/A	N/A	N/A	
Aminoazobenzene (60-09-3)	10 ug/L	N/A	N/A	
p-Dimethylaminoazobenzene (60-11-7)	N/A	N/A	N/A	

5-Nitroacenaphthene (602-87-9)	10 ug/L	N/A	N/A	
Dimethoate (60-51-5)	20 ug/L	N/A	N/A	
Dieldrin (60-57-1)	N/A	81.68 % Rec (ML)	25.86 % RSD (ML)	50 ug/L
2,6-Dinitrotoluene (606-20-2)	10 ug/L	98.8 % Rec (ML)	19.7 % RSD (ML)	50 ug/L
Pentachlorobenzene (608-93-5)	10 ug/L	N/A	N/A	
N-Nitrosodi-n-propylamine (621-64-7)	N/A	99.56 % Rec (ML)	44.94 % RSD (ML)	50 ug/L
Phenacetin (62-44-2)	20 ug/L	N/A	N/A	
Ethyl methanesulfonate (62-50-0)	20 ug/L	N/A	N/A	
Aniline (62-53-3)	N/A	N/A	N/A	
Dichlorvos (62-73-7)	10 ug/L	N/A	N/A	
N-Nitrosodimethylamine (62-75-9)	N/A	N/A	N/A	
Carbaryl (63-25-2)	N/A	N/A	N/A	
Diethylsulfate (64-67-5)	100 ug/L	N/A	N/A	
Benzoic acid (65-85-0)	50 ug/L	N/A	N/A	
Methyl methanesulfonate (66-27-3)	10 ug/L	N/A	N/A	
Hexachloroethane (67-72-1)	10 ug/L	71.34 % Rec (ML)	18.6 % RSD (ML)	50 ug/L
Hexamethylphosphoramide	20 ug/L	N/A	N/A	

(680-31-9)				
Monocrotophos (6923-22-4)	40 ug/L	N/A	N/A	
Pyridine, 3-chloromethyl-, hydrochloride (6959-48-4)	N/A	N/A	N/A	
4-Chlorophenylphenyl ether (7005-72-3)	10 ug/L	92.06 % Rec (ML)	29.08 % RSD (ML)	50 ug/L
Hexachlorophene (70-30-4)	50 ug/L	N/A	N/A	
Endrin (72-20-8)	N/A	N/A	N/A	
Mestranol (72-33-3)	20 ug/L	N/A	N/A	
Methoxychlor (72-43-5)	N/A	N/A	N/A	
4,4'-DDD (72-54-8)	N/A	55.2 % Rec (ML)	64.08 % RSD (ML)	50 ug/L
4,4'-DDE (72-55-9)	N/A	68.92 % Rec (ML)	36.92 % RSD (ML)	50 ug/L
Phosmet (732-11-6)	40 ug/L	N/A	N/A	
Endrin aldehyde (7421-93-4)	N/A	68.28 % Rec (ML)	71.76 % RSD (ML)	50 ug/L
Heptachlor (76-44-8)	N/A	81.06 % Rec (ML)	49.54 % RSD (ML)	50 ug/L
Crotoxyphos (7700-17-6)	20 ug/L	N/A	N/A	
Hexachlorocyclopentadiene (77-47-4)	10 ug/L	N/A	N/A	
Mevinphos (7786-34-7)	10 ug/L	N/A	N/A	
Tri-p-tolyl phosphate (78-32-0)	10 ug/L	N/A	N/A	

Dioxathion (78-34-2)	N/A	N/A	N/A	
Isophorone (78-59-1)	10 ug/L	114.82 % Rec (ML)	33.52 % RSD (ML)	50 ug/L
Carbophenothion (786-19-6)	10 ug/L	N/A	N/A	
Toxaphene (8001-35-2)	N/A	N/A	N/A	
Pentachloronitrobenzene (82-68-8)	20 ug/L	N/A	N/A	
Acenaphthene (83-32-9)	10 ug/L	96.38 % Rec (ML)	19.66 % RSD (ML)	50 ug/L
Diethyl phthalate (84-66-2)	10 ug/L	45 % Rec (ML)	52.44 % RSD (ML)	50 ug/L
Di-n-butyl phthalate (84-74-2)	10 ug/L	60.42 % Rec (ML)	40.2 % RSD (ML)	50 ug/L
Phenanthrene (85-01-8)	10 ug/L	86.88 % Rec (ML)	15.5 % RSD (ML)	50 ug/L
Phthalic anhydride (85-44-9)	100 ug/L	N/A	N/A	
Butyl benzyl phthalate (85-68-7)	10 ug/L	62.64 % Rec (ML)	54.84 % RSD (ML)	50 ug/L
N-Nitrosodiphenylamine (86-30-6)	10 ug/L	N/A	N/A	
Azinphos-methyl (86-50-0)	100 ug/L	N/A	N/A	
Fluorene (86-73-7)	10 ug/L	90 % Rec (ML)	14.22 % RSD (ML)	50 ug/L
2,6-Dichlorophenol (87-65-0)	10 ug/L	N/A	N/A	
Hexachlorobutadiene (87-68-3)	10 ug/L	68.98 % Rec (ML)	26.98 % RSD (ML)	50 ug/L
Pentachlorophenol	50 ug/L	96.98 % Rec	38.66 % RSD	50 ug/L

(87-86-5)		(ML)	(ML)	
2,4,6-Trichlorophenol (88-06-2)	10 ug/L	90.64 % Rec (ML)	25.62 % RSD (ML)	50 ug/L
2-Nitroaniline (88-74-4)	50 ug/L	N/A	N/A	
2-Nitrophenol (88-75-5)	10 ug/L	104.7 % Rec (ML)	32.2 % RSD (ML)	50 ug/L
Dinoseb (88-85-7)	20 ug/L	N/A	N/A	
o-Anisidine (90-04-0)	10 ug/L	N/A	N/A	
1-Chloronaphthalene (90-13-1)	N/A	N/A	N/A	
Naphthalene (91-20-3)	10 ug/L	79.16 % Rec (ML)	28.64 % RSD (ML)	50 ug/L
2-Methylnaphthalene (91-57-6)	10 ug/L	N/A	N/A	
2-Chloronaphthalene (91-58-7)	10 ug/L	89.02 % Rec (ML)	13.68 % RSD (ML)	50 ug/L
beta-Naphthylamine (91-59-8)	N/A	N/A	N/A	
Methapyrilene (91-80-5)	100 ug/L	N/A	N/A	
3,3'-Dichlorobenzidine (91-94-1)	20 ug/L	97.7 % Rec (ML)	53.9 % RSD (ML)	50 ug/L
N-Nitrosodi-n-butylamine (924-16-3)	10 ug/L	N/A	N/A	
4-Aminobiphenyl (92-67-1)	20 ug/L	N/A	N/A	
Benzidine (92-87-5)	N/A	N/A	N/A	
4-Nitrobiphenyl (92-93-3)	10 ug/L	N/A	N/A	

N-Nitrosopyrrolidine (930-55-2)	40 ug/L	N/A	N/A	
Dihydrosafrole (94-58-6)	N/A	N/A	N/A	
Safrole (94-59-7)	10 ug/L	N/A	N/A	
Sulfallate (95-06-7)	10 ug/L	N/A	N/A	
o-Cresol (95-48-7)	N/A	N/A	N/A	
1,2-Dichlorobenzene (95-50-1)	10 ug/L	80.56 % Rec (ML)	24.78 % RSD (ML)	50 ug/L
o-Toluidine (95-53-4)	10 ug/L	N/A	N/A	
2-Chlorophenol (95-57-8)	10 ug/L	78.58 % Rec (ML)	29.94 % RSD (ML)	50 ug/L
5-Chloro-o-toluidine (95-79-4)	N/A	N/A	N/A	
2,4-Diaminotoluene (95-80-7)	10 ug/L	N/A	N/A	
4-Chloro-o-phenylenediamine (95-83-0)	N/A	N/A	N/A	
1,2,4,5-Tetrachlorobenzene (95-94-3)	10 ug/L	N/A	N/A	
2,4,5-Trichlorophenol (95-95-4)	20 ug/L	N/A	N/A	
Endosulfan-I (959-98-8)	N/A	N/A	N/A	
DBCP (96-12-8)	N/A	N/A	N/A	
Acetophenone (98-86-2)	10 ug/L	N/A	N/A	
Nitrobenzene	10 ug/L	102.9 % Rec	27.42 % RSD	50 ug/L

(98-95-3)		(ML)	(ML)	
3-Nitroaniline (99-09-2)	50 ug/L	N/A	N/A	
sym-Trinitrobenzene (99-35-4)	N/A	N/A	N/A	
5-Nitro-o-toluidine (99-55-8)	N/A	N/A	N/A	
5-Nitro-o-anisidine (99-59-2)	10 ug/L	N/A	N/A	
1,3-Dinitrobenzene (99-65-0)	20 ug/L	N/A	N/A	

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Precision Descriptor Notes	The precision and accuracy values were determined using regression equations derived from a 15 laboratory validation study. The study determined analytes using reagent water, drinking water, surface water, and industrial wastewaters with additions at six concentrations over the range 5 to 1300 ug/L. Single operator precision, overall precision, and accuracy were found to be directly related to the concentration of the parameter and essentially independent of the sample matrix.
Detection Level Note	EQLs are estimated quantitation limits.

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	9056A
Revision Information	Revision 1, November 2000
Method Name	**Descriptive Name:** Anion Chromatography Method **Official Name:** Determination Of Inorgainic Anions By Ion Chromatography
Media	**Media:** VARIOUS
Subcategory	Inorganic
Citation	**SW-846 Update IVB**
Method Download	**Download full method now (PDF file)**
Summary of Method	A small volume (2-3 mL) of sample is injected into an ion chromatograph to flush and fill a constant volume sample loop. The sample is then injected into a stream of carbonate-bicarbonate eluent of the same strength as the sample. The samples are passed through three ion exchange columns (with different functionalities), and compounds are identified by retention time, and quantitated by peak height or area (by comparison with a standard calibration curve).
Scope and Application	This method is applicable to the determination of chloride, fluoride, bromide, nitrate, phosphate, and sulfate in the collection solutions from the bomb combustion of solid waste samples, as well as all water samples.
Applicable Concentration Range	0.2 - 100mg/L. Ranges differ for each analyte. This range is taken from the lowest and highest limit of the analytes listed in the method.
Interferences	
QC Requirements	Mid-range calibration standard every 10 injections; sample duplicate (1 in every 10 samples), MS
Sample Handling	Collect the samples using a sampling plan that addresses the considerations discussed in

	Chapter 9 of this manual. Preserve the samples by refrigeration at 4 degrees C. Analyze the samples as soon as possible after collection.
Max Holding Time	ASAP
Relative Cost/Effort	$51 to $200
Sample Prep Method(s)	

Method *Anion Chromatography Method* has 7 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Phosphate (14265-44-2)	.1 mg/L	N/A	N/A	
Nitrate (14797-55-8)	.1 mg/L	N/A	N/A	
Nitrite (14797-65-0)	.1 mg/L	N/A	N/A	
Sulfate (14808-79-8)	.1 mg/L	N/A	N/A	
Chloride (16887-00-6)	.1 mg/L	N/A	N/A	
Fluoride (16984-48-8)	.05 mg/L	N/A	N/A	
Bromide (24959-67-9)	.1 mg/L	N/A	N/A	

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Precision Descriptor Notes	-
Detection Level Note	Value corresponds to MDL determined per 40 CFR part 136, Appendix B.

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Method Summary

Method Source	**U.S. EPA Office of Solid Waste**
Method Number	9012A
Revision Information	Revision 1, December 1996
Method Name	**Descriptive Name:** Cyanides, Total and Amenable (CN- Amenable) by Colorimetry **Official Name:** Total and Amenable Cyanide (Automated Colorimetric with off-line Distillation)
Media	**Media:** VARIOUS
Subcategory	Inorganic
Citation	**SW-846 Online: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods**
Method Download	**Download full method now (PDF file)**
Summary of Method	The cyanide, as hydrocyanic acid (HCN), is released from samples containing cyanide by means of a reflux-distillation operation under acidic conditions and absorbed in a scrubber containing sodium hydroxide solution. The cyanide ion in the absorbing solution is then determined by automated UV colorimetry. In the automated colorimetric measurement, the cyanide is converted to cyanogen chloride (CNCl) by reaction with Chloramine-T at a pH less than 8 without hydrolyzing to the cyanate. After the reaction is complete, color is formed on the addition of pyridine-barbituric acid reagent. The concentration of NaOH must be the same in the standards, the scrubber solutions, and any dilution of the original scrubber solution to obtain colors of comparable intensity.
Scope and Application	Method 9012 is used to determine the concentration of inorganic cyanide (CAS Registry Number 57-12-5) in wastes or leachate. The method detects inorganic cyanides that are present as either soluble salts or complexes. It is used to determine values for both total cyanide and cyanide amenable to chlorination. The "reactive" cyanide content of a waste, that is, the cyanide content that could generate toxic fumes when exposed to mild acidic conditions, is not distilled by Method 9012 (refer to Chapter Seven). However, Method 9012 may be used to quantify the concentration of cyanide from the reactivity test.
Applicable Concentration Range	0.02 - 1mg/L
Interferences	(1) Oxidizing agents can destroy cyanides during storage.

	(2) Sulfide can complex with cyanide in sample or distillate. (3) Fatty acids cause interference during distillation. (4) Carbonate causes interference during distillation. (5) Aldehydes cause interference during distillation. (6) Glucose/Sugars causes interference during distillation. (7) Sulfur-containing compound causes interference during distillation by forming free sulfide that is captured in distillate. (8) High results may be obtained for samples that contain nitrate and/or nitrite. The possibility of interference of nitrate and nitrite is eliminated by pretreatment with sulfamic acid just before distillation. Nitrate and nitrite are interferences when present at levels higher than 10 mg/L and in conjunction with certain organic compounds.
QC Requirements	Refer to Chapter One for specific quality control procedures. QC procedures include: calibration verification with an independent calibration check standard, matrix spike sample for every 10 samples, and the use of the method of standard additions for the analysis of all samples that suffer from matrix interferences.
Sample Handling	Collect samples in glass or plastic containers. If oxidizing agents are present, add sodium arsenite at time of collection. Preserve aqueous samples at time of collection with 50% sodium hydroxide until pH is equal to or greater than 12. Refrigerate at 4°C and begin preparation within 14 days. Extract solid and oily wastes by Method 9013 prior to analysis. Extract fatty acids, detergents, and surfactants by adding acetic acid to a sample until the pH is 6-7, then extract with isooctane, hexane, or chloroform and immediately adjust the pH to above 12 with NaOH.
Max Holding Time	See Chapter Three for information
Relative Cost/Effort	Less than $50
Sample Prep Method(s)	

Method *Cyanides, Total and Amenable (CN- Amenable) by Colorimetry* has 2 analytes associated with it.

Analyte	Detection Level	Bias	Precision	False Positive
Cyanides (57-12-5)	.02 mg/L	N/A	N/A	
Available Cyanide (E-10275)	.02 mg/L	N/A	N/A	

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Precision Descriptor Notes	-
Detection Level Note	Detection limits based on multi-concentration studies in real matrices.

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7.2.7 Metals

7.2.7.1 Method SW6010B—Trace Elements (Metals) by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Samples are analyzed for trace elements or metals using Method SW6010B for water and soils. Analysis for most metals requires digestion of the sample. Following digestion, the trace elements are determined simultaneously or sequentially using ICP-AES. The elements and corresponding RLs for this method are listed in Table 7.2.7.1-1. Table 7.2.7.1-2 provides acceptance criteria for Method SW6010B. Also included in Table 7.2.7.1-2 are the ME limits taken from the DoD QSM. Table 7.2.7.1-3 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria.

TABLE 7.2.7.1-1
Reporting Limits for Method SW6010B
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Water		Soil	
	RL	Unit	RL	Unit
Aluminum	0.2	mg/L	20	mg/kg
Antimony	0.05	mg/L	10	mg/kg
Arsenic	0.03	mg/L	5	mg/kg
Barium	0.05	mg/L	1	mg/kg
Beryllium	0.004	mg/L	1	mg/kg
Cadmium	0.005	mg/L	0.5	mg/kg
Calcium	1.1	mg/L	100	mg/kg
Chromium	0.01	mg/L	1	mg/kg
Cobalt	0.06	mg/L	1	mg/kg
Copper	0.01	mg/L	2	mg/kg
Iron	0.2	mg/L	3	mg/kg
Lead	0.025	mg/L	3	mg/kg
Magnesium	1.0	mg/L	100	mg/kg
Manganese	0.01	mg/L	1	mg/kg
Molybdenum	0.015	mg/L	3	mg/kg
Nickel	0.02	mg/L	2	mg/kg
Potassium	1.0	mg/L	200	mg/kg
Selenium	0.03	mg/L	3	mg/kg
Silver	0.01	mg/L	1	mg/kg
Sodium	1.0	mg/L	100	mg/kg
Thallium	0.08	mg/L	6	mg/kg
Vanadium	0.01	mg/L	1	mg/kg
Zinc	0.02	mg/L	2	mg/kg

Extractable TPH components, such as kerosene, diesel, motor oil, and other high molecular-weight extractable petroleum products, are typically prepared by Method SW3520C or SW3510C for water-based matrices or by Method SW3550B for soil/sludge matrices. Other extraction options are listed in Table 7.2.1. After the sample is extracted, analysis is accomplished on a GC equipped with a capillary or megabore column and a FID. RLs for volatile TPH and extractable TPH are provided in Table 7.2.1.1-1.

TABLE 7.2-1
Analytical Methods
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analytical Method	Parameter	Preparation Methods	
		Water/Aqueous	Soil/Solid
GC			
SW8015B	TPH volatiles	5030B, 5031	5035A
SW8015B	TPH extractables	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8081A	Organochlorine pesticides	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8082	PCBs	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8141A	Organophosphorus compounds	3510C, 3520C, 3535	3540C, 3541, 3545
SW8151A	Chlorinated herbicides	see analytical method	see analytical method
RSK-175	Soil gases in water	see analytical method	N/A
GC/MS			
SW8260B	Volatile organics	5030B, 5031, 5032	3585, 5021, 5032, 5035A
SW8270C	Semivolatile organics	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
TO-14A/TO-15	Volatile Organics in Air	N/A	N/A
GC/MS SIM			
SW8270C SIM	PAHs	3510C, 3520C	3540C, 3541, 3545, 3550B
HRGC/LRMS			
SW8280	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HRGC/HRMS			
SW8290	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HPLC			
SW8330	Explosives residues	see analytical method	see analytical method
HPLC/MS & HPLC/MS/MS			
SW8321A	Chlorinated herbicides by HPLC-MS	3510C, 3520C	3540C, 3541, 3550B
SW8321A (Mod)	Explosives by HPLC-MS	3535A	3550B
SW8321A (Mod)	Perchlorate by HPLC-MS-MS	see analytical method	see analytical method
ICP-AES/ICP-MS/GFAA/CVAA			
SW6010B	Trace metals by ICP-AES	3005A, 3010A, 3015	3050B, 3051
SW6020	Trace metals by ICP-MS	3005A, 3010A, 3015	3050B, 3051
SW7470A	Mercury (water)	see analytical method	N/A
SW7471A	Mercury (soil)	N/A	See analytical method
Wet Chemistry			
SW7196A	Hexavalent chromium	see analytical method	3060A
SW9010B	Total and Amenable Cyanide (distillation)	see analytical method	9013
SW9012A	Total and Amenable Cyanide (colorimetric)	see analytical method	9013
SW9056	Common anions	see analytical method	As per EPA 300.0

* (8) Method 6010B or 6020 may be substituted for the analysis of this analyte as long as the AFCEE RL can be met. If used, all 6010B or 6020 quality control criteria must be met.

Identification and quantitation of TPH components require more analytical judgment than other GC methods. The TPH chromatograms consist of groups of peaks that fall within a

TABLE 7.2.7.1-2
QC Acceptance Criteria for Method SW6010B
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Accuracy Water (% R)	Precision Water RPD (%)	ME Limits Water (% R)	Accuracy Soil (% R)	Precision Soil RPD (%)	ME Limits Soil (% R)
Aluminum	80–120	≤ 20	80–120	79–120	≤ 30	75–120
Antimony	80–120	≤ 20	80–120	80–120	≤ 30	75–120
Arsenic	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Barium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Beryllium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Cadmium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Calcium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Chromium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Cobalt	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Copper	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Iron	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Lead	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Magnesium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Manganese	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Molybdenum	79–120	≤ 20	75–120	80–120	≤ 30	75–120
Nickel	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Potassium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Selenium	80–120	≤ 20	75–120	80–120	≤ 30	75–120
Silver	80–120	≤ 20	75–120	75–120	≤ 30	70–120
Sodium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Thallium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Vanadium	80–120	≤ 20	80–120	80–120	≤ 30	80–120
Zinc	80–120	≤ 20	80–120	80–120	≤ 30	75–120

TABLE 7.2.7.1-3
Summary of Calibration and QC Procedures for Method SW6010B
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
Initial calibration for all analytes (minimum one standard and a blank) (ICAL)	Daily initial calibration before sample analysis	If more than one standard is used, correlation coefficient must be ≥ 0.995	If applicable, correct problem and repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until there is a valid ICAL.
ICV (second source)	Daily after ICAL	All analytes within ± 10% of expected value	Correct problem and verify second source standard. Rerun ICV. If that fails, correct problem and repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until the calibration has been verified.
Calibration verification (Instrument Check Standard) (CCV)	After every 10 samples At the end of the analysis sequence	All analyte(s) within ± 10% of expected value and RSD of replicate integrations < 5%	Correct problem then repeat CCV and reanalyze all samples since last successful calibration verification.	Apply Q-flag to all results for the specific analyte(s) >10 %D for all samples associated with the calibration verification.
Calibration blank	Before beginning a sample run After every calibration verification	No analytes detected ≥ 2X MDL	Correct problem then analyze calibration blank and previous 10 samples.	Apply B-flag to all associated positive results for the specific analyte(s) as appropriate. See guidance Section 8.2.1.4.
Low-level calibration check standard (at or below RL)	Daily, after initial calibration. Not required if multi-point calibration (3 or more points) with low std at or below RL is performed	All analyte(s) with ± 20% of expected value	Correct problem then reanalyze.	No samples may be analyzed without a valid low-level calibration check standard. Low-level calibration check standard should be less than or equal to the RL.
Linear range calibration (high) check standard	Every three months	Analyte within ± 10% of expected value	Correct problem then reanalyze or re-set linear range.	Apply J-flag to the specific analyte(s) for all results not within linear range.
Method blank	One per analytical batch	No analytes detected > ½ RL For common lab contaminants, no analytes detected > RL.	Assess data. Correct problem. If necessary, reprep and analyze method blank and all samples processed with the contaminated blank.	Apply B-flag to all associated positive results for the specific analyte(s) as appropriate. See guidance Section 8.2.1.4.

TABLE 7.2.7.1-3
Summary of Calibration and QC Procedures for Method SW6010B
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
Interference check solution (ICS)	At the beginning of an analytical run	**ICS-A:** All non-spiked analytes < 2 x MDL (unless they are a verified trace impurity from one of the spiked analytes) **ICS-AB:** Within ± 20% of expected value	Terminate analysis; locate and correct problem; reanalyze ICS.	Flagging criteria are not appropriate. No samples may be analyzed without a valid ICS.
LCS for all analytes	One LCS per analytical batch	Acceptance criteria: Table 7.2.7.1-2 See Section 4.4.1.2 for guidance on determining marginal exceedances.	Correct problem then reanalyze. If still out, reprep and reanalyze the LCS and all samples in the affected AFCEE batch.	If corrective action fails, apply Q-flag to the specific analyte(s) which are not marginal exceedances in all samples in the associated preparatory batch.
Dilution test	Each new sample matrix, at least once per analytical batch (only applicable for analytes with concentrations ≥ 50X MDL)	Fivefold (1+4) dilution must agree within ± 10% of the original determination	Perform post digestion spike addition.	Apply J-flag to all sample results for the specific analyte from the same matrix in the batch if either of following exist: (1) dilution test not run and batch had analyte concentrations ≥50X MDL or (2) % D ≥ 10 and post digestion spike not performed.
Post digestion spike addition	When dilution test fails or if an analyte's concentration for all samples in a batch is less than 50X MDL	Recovery within 75–125% of expected results	Check for instrumental problem then reanalyze post digestion spike addition if appropriate.	Apply J-flag to all sample results (for same matrix) for the specific analyte(s) for all samples associated with the post digestion spike addition. If post digestion spike addition recovery is < 10%, apply Q-flag to all sample results (for same matrix) for the specific analyte(s) for all samples associated with the post digestion spike addition.

6.1 Method Descriptions

Section 6.1 contains subsections for each screening analytical procedure. Each subsection contains a brief method description and associated RLs, if applicable.

6.1.1 Methods SW1010/SW1020A/SW1030—Ignitability

Method SW1010 makes use of the Pensky-Martens tester to determine the flash point of liquid samples, including those that form surface films and/or contain non-filterable suspended solids.

Method SW1020A makes use of the Setaflash Closed Tester to determine the flash point of liquids that have flash points between 0 and 110°C and viscosities lower than 150 stokes at 25°C. If a sample contains non-filterable suspended solids, use SW1010 (Pensky-Martens Ignitability) instead of Method SW1020.

Method SW1030 is used to determine the ignitability of solids and is suitable for the pastes, granular materials, solids that can be cut into strips, and powdery substances.

6.1.2 Method SW1110—Corrosivity

This test exposes steel to liquid waste to determine the corrosivity of the waste.

6.1.3 Method SW9040B (water)/SW9045C (soil)—pH

pH measurements shall be performed for aqueous samples using Method SW9040. pH measurements of soil or solid samples are performed using Method SW9045C. Measurements are determined electrometrically using either a glass electrode in combination with a reference potential, or a combination electrode. pH measurements are important tools for predicting the extent of contamination as well as providing information regarding the potential ionization forms of contaminants in groundwater. This can be used to predict their respective fate and transport.

6.1.4 Method SW9050A—Conductance

Standard conductivity meters are used. Temperature is also reported. Conductivity is an important parameter used in fate and transport modeling of contaminants.

6.1.5 Method SW9060—Total Organic Carbon

Organic carbon is measured using a carbonaceous analyzer. This instrument converts the organic carbon in a sample to carbon dioxide by either catalytic combustion or wet chemical oxidation. The carbon dioxide formed is then either measured directly by an infrared detector or converted to methane and measured by a FID. The amount of carbon dioxide or methane in a sample is directly proportional to the concentration of carbonaceous material in the sample.

TABLE 6.2-1
Summary of Calibration and QC Procedures for Screening Methods
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Method	Applicable Parameter	QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Data Flagging Criteria[b]
SW-846c	Moisture	Field duplicate	1 per 20 samples	% solid RPD □ 15%	Correct problem, repeat measurement. If still out, flag data	J if RPD > 15% and □ □ Q if RPD > 30%
SW9040B	pH (water)	2-point calibration with pH buffers	Once per day	± 0.05 pH units for every buffer	If calibration is not achieved, check meter, buffer solutions, and probe; replace if necessary; repeat calibration	Flagging criteria are not appropriate
		pH 7 buffer	At each sample location	± 0.1 pH units	Correct problem, recalibrate	Flagging criteria are not appropriate
		Field duplicate	10% of field samples	± 0.1 pH units	Correct problem, repeat measurement	J
SW9045C	pH (soil)	2-point calibration with pH buffers	Once per day	± 0.05 pH unit	Check with new buffers; if still out, repair meter; repeat calibration check	Flagging criteria are not appropriate
		pH 7 buffer	At each sample location	± 0.1 pH unit	Recalibrate	Flagging criteria are not appropriate
		Field duplicate	10% of field samples	± 0.1 pH unit	Correct problem, repeat measurement. If still out, repeat calibration and reanalyze samples	J
SW9050A	Conductance	Calibration with KCl standard	Once per day at beginning of testing	± 5%	If calibration is not achieved, check meter, standards, and probe; recalibrate	Flagging criteria are not appropriate
		Field duplicate	10% of field samples	± 5%	Correct problem, repeat measurement	J
E170.1	Temperature	Field duplicate	10% of field samples	± 1.0 □C	Correct problem, repeat measurement	J
E180.1	Turbidity	Calibration with one formazin standard per instrument range used	Once per day at beginning of testing	± 5 units, 0–100 range ± 0.5 units, 0–0.2 range ± 0.2 units, 0–1 range	If calibration is not achieved, check meter; replace if necessary, recalibrate	Flagging criteria are not appropriate
		Field duplicate	10% of field samples	RPD □ 20%	Correct problem, repeat measurement	J

TABLE 5.1.2-1
Requirements for Containers, Preservation, and Holding Times
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Parameter	Analytical Methods	Sample Container		Preservation		Holding Time	
		Aqueous	Solid	Aqueous	Solid	Aqueous	Solid
Cyanide, total and amenable to chlorination	SW9010B SW9012A	1 Liter glass or HDPE bottle	250 mL wide-mouth glass jar	Adjust pH to ≥ 12 with 50% NaOH. If oxidizing agents present, add 5 mL NaAsO2 per Liter, or 0.6g ascorbic acid per Liter. Cool to 4°C	Cool to 4°C	14 days	14 days)
Filterable residue	E160.1	100 mL glass or HDPE bottle	N/A	Cool to 4°C	N/A	7 days	N/A
Nonfilterable residue	E160.2	100 mL glass or HDPE bottle	N/A	Cool to 4°C	N/A	7 days	N/A
Hydrogen ion (pH)	SW9040B/ SW9045C	60 mL glass or HDPE bottle	125mL wide-mouth glass bottle	None required	Cool to 4°C	24 hours	As soon as possible
Nitrogen, as NO2/NO3	E353.1	500 mL glass or HDPE bottle	N/A	Cool to 4°C, H2SO4 to pH < 2	N/A	28 days	N/A
Alkalinity-	E310.2	1 Liter HDPE bottle	250 mL wide-mouth glass bottle	Cool to 4°C	Cool to 4°C	14 days-	14 days
Sulfide	SW9030	500 mL HDPE bottle	N/A	Cool to 4°C, pH < 2 NaOH	N/A	7 days	N/A
Hardness	E130	500 mL HDPE bottle	N/A	Cool to 4°C, HNO3 to pH < 2	N/A	28 days	N/A
Conductance	SW9050A	250 mL glass or HDPE bottle	N/A	None required	N/A	Immediately onsite	N/A

6.0 Screening Analytical Methods

Screening or non-definitive analytical methods can be useful tools in generating quality environmental data. These methods should be selected as part of the overall systematic planning process and can serve to minimize sampling error, thereby minimizing costs. The various analytical screening methods contained in this section are shown in Table 6-1. This section includes brief descriptions of the methods and QC required for screening procedures commonly used to conduct work efforts. The methods and QC procedures were taken from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA SW-846, Third Edition) (EPA, 2002 and its subsequent updates), "Methods for Chemical Analysis of Water and Wastes" (EPA, 1983), *ASTM Annual Book of Standards* (1993), and from various manufacturers' literature. Specific methods for a project are to be selected from Table 6-1 unless a variance is requested. The list below is not intended to be all inclusive. Other appropriate methods based on site-specific PQOs should be provided in the project-specific QAPP. Also, it is understood that some of these methods may be performed in a laboratory, and if accompanied by the appropriate QC procedures and documentation, the data generated may be considered as definitive.

TABLE 6-1
Screening Analytical Methods
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Method	Parameter
SW-846 (3550)	Moisture (as % solids)
SW1020A / SW1010/ SW1030	Ignitability
SW1110	Corrosivity
SW9040B	pH (water)
SW9045C	pH (soil)
SW9050A	Conductance
SW9060	Total organic carbon
E160.1	Filterable residue
E160.2	Nonfilterable residue
E170.1	Temperature
E180.1	Turbidity
E310.1	Alkalinity
E360.1	Dissolved oxygen
Organic vapor-analysis using an instrument equipped with a flame ionization detector (FID) or photoionization detector (PID) or other selective detector (for example, for explosives).	Soil gas screening-halogenated, aromatic, and petroleum hydrocarbons. Screening of drill cuttings, borings, monitoring wells, and temporary probes.
ASTM D422	Particle size
ASTM D1498	Oxidation-reduction potential
ASTM D3416	Methane
SW4020	PCBs by Immunoassay
SW9074	TPH by PetroFLAG (in soil)
SW4050	TNT by Immunoassay
SW4051	RDX by Immunoassay

90103

7.2.8 Wet Chemical Methods

7.2.8.1 Methods SW9010B/SW9012A—Total Cyanide and Cyanide Amenable to Chlorination

Water and waste samples are analyzed for total cyanide using Method SW9010B or SW9012A. These methods are equivalent in principle of analysis; SW9010B is a manual procedure, and SW9012A is an automated procedure.

Both methods are used to determine the concentration of inorganic cyanide in aqueous wastes and leachates. The methods detect inorganic cyanides that are present as either simple soluble salts or complex ions. They are used to determine values for both total cyanide and cyanide amenable to chlorination. The cyanide is released by reacting the sample with a strong acid and catalyst in a reflux-distillation operation. The cyanide is purged from the sample and captured in a scrubber solution containing sodium hydroxide. Total cyanide in soils is determined after acidification of the soil and distillation. The cyanide ion concentration in the absorbing solution is determined colorimetrically. For Method SW9010B, the procedure in Method 9014 is followed, while Method SW9012A uses automated colorimetry. RLs for cyanide are listed in Table 7.2.8.1-1. Table 7.2.8.1-2 provides acceptance criteria for Method SW79010B/SW9012A. Table 7.2.8.1-3 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria.

TABLE 7.2.8.1-1
Reporting Limits for Method SW9010B/SW9012A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Water		Soil	
	RL	Unit	RL	Unit
Total cyanide	0.02	mg/L	0.5	mg/kg

TABLE 7.2.8.1-2
QC Acceptance Criteria for Method SW9010B/SW9012A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Accuracy Water (% R)	Precision Water RPD (%)	Accuracy Soil (%R)	Precision Soil RPD (%)
Total cyanide	79–114	≤ 20	75–125	≤ 30

TABLE 7.2.8.1-3
Summary of Calibration and QC Procedures for Method SW9010B/SW9012A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
Initial multipoint calibration (minimum six standards and a calibration blank) (ICAL)	Initial daily calibration before sample analysis	Correlation coefficient ≥0.995 for linear regression	Correct problem then repeat initial calibration. **Note**: Plot of absorbance versus concentration may be nonlinear.	Problem must be corrected. Samples may not be analyzed until there is a valid ICAL.
Distilled standards (one high and one low)	Once per ICAL	Value within ± 15% of true value	Correct problem then repeat distilled standards.	Problem must be corrected. No samples may be run until distilled standards have passed.
Second-source calibration verification	Once after ICAL	Value within ± 15% of expected value	Correct problem and verify second source standard. Rerun second source verification. If that fails, correct problem and repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until the calibration has been verified.
Method blank	One per analytical batch	No analytes detected > ½ RL	Assess data. Correct problem. If necessary, reprep and analyze method blank and all samples processed with the contaminated blank.	Apply B-flag to all associated positive results as appropriate. See guidance Section 8.2.1.4.
LCS for all analytes	One LCS per analytical batch	Acceptance criteria: Table 7.2.8.1-2	Correct problem then reanalyze. If still out, reprep and reanalyze the LCS and all samples in the affected AFCEE batch.	If corrective action fails, apply Q-flag to all samples in the associated preparatory batch.
MS/MSD	One MS/MSD per every 20 Air Force project samples per matrix	Acceptance criteria: Table 7.2.8.1-2	Assess data to determine whether there is a matrix effect or analytical error. Analyze LCS for failed target analytes. Potential matrix effects should be communicated to CH2M HILL so an evaluation can be made with respect to the PQOs.	For all samples collected from the same site matrix as the parent, apply M-flag if: (1) %R for MS or MSD > UCL, (2) %R for MS or MSD < LCL, or (3) MS/MSD RPD > CL
Sample duplicate (replicate)	Once per every 20 project samples	% D of duplicate within ±20% of sample	Correct problem and reanalyze sample and duplicate.	Apply J-flag if samples cannot be rerun or reanalysis does not correct problem.

TABLE 7.2.8.1-3
Summary of Calibration and QC Procedures for Method SW9010B/SW9012A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
MDL study	At initial setup and subsequently once per 12-month period or quarterly MDL verification checks.	Detection limits established shall be ≤ ½ the RLs in Table 7.2.8.1-1. See 40 CFR, Part 136 Appendix B. Verification checks must produce a response at least 3X instrument noise level and must produce a response greater than the blanks associated with the MDL study.	Run MDL verification check at higher level and set higher MDL or reconduct MDL study.	N/A
Results reported between MDL and RL	None	None	None	Apply F-flag to all results between MDL and RL.

a All corrective actions associated with AFCEE project work shall be documented, and all records shall be maintained by the laboratory.

b Flagging criteria are applied when acceptance criteria were not met and corrective action was not successful or corrective action was not performed.

7.2.8.2 Method SW9056A—Common Anions by Ion Chromatography

This method addresses the sequential determination of the anions chloride, fluoride, bromide, nitrate, nitrite, phosphate, and sulfate in aqueous samples, aqueous extracts of solids, and the collection solutions from the bomb combustion of solid waste samples.

A small volume of aqueous sample is injected into an ion chromatograph to flush and fill a constant volume sample loop. The sample is then injected into a stream of eluent. For aqueous extracts of solid samples, AFCEE recommends using the procedure listed in Section 11.7 of EPA Method 300.0 (a 10-fold dilution of the solid sample with reagent grade water).

The sample is pumped through three different ion exchange columns and into a conductivity detector. The first two columns, a precolumn (guard) column and a separator column, are packed with a low-capacity, strongly basic anion exchanger. Ions are separated into discrete bands based on their affinity for the exchange sites of the resin. The last column is a suppressor column that reduces the anions in the sample to their corresponding acids. The separated anions in their acid form are measured using an electrical-conductivity cell. Anions are identified based on their retention times compared to known standards. Quantitation is accomplished by measuring the peak height or area and comparing it to a calibration curve generated from known standards.

RLs are listed in Table 7.2.8.2-1. Table 7.2.8.2-2 provides acceptance criteria for Method SW9056A. Table 7.2.8.2-3 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria.

7.2.7.3 Methods SW7470A/SW7471A—Mercury Cold-Vapor Atomic Absorption

Water and soil samples are analyzed for mercury using Methods SW7470A and SW7471A, respectively. These methods are cold-vapor, flameless atomic absorption (CVAA) techniques based on the absorption of radiation by mercury vapor. Mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption (AA) spectrophotometer. Mercury concentration is measured as a function of absorbance. The RLs for these methods are listed in Table 7.2.7.3-1. Table 7.2.7.3-2 provides acceptance criteria for Method SW7470A/SW7471A. Table 7.2.7.3-3 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria.

TABLE 7.2.7.3-1
Reporting Limits for Methods SW7470A/SW7471A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Water		Soil	
	RL	Unit	RL	Unit
Mercury	0.001	mg/L	0.1	mg/kg

TABLE 7.2.7.3-2
QC Acceptance Criteria for Methods SW7470A/SW7471A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Accuracy Water (% R)	Precision Water RPD (%)	Accuracy Soil (% R)	Precision Soil RPD (%)
Mercury	80-120	≤ 15	80-120	≤ 30

TABLE 7.2.7.3-3
Summary of Calibration and QC Procedures for Methods SW7470A/SW7471A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
Initial multipoint calibration (minimum five standards and a blank) (ICAL)	Daily initial calibration before sample analysis	Correlation coefficient ≥0.995 for linear regression	Correct problem then repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until there is a valid ICAL.
Second-source calibration check standard (ICV)	Once per ICAL	Analyte within ± 10% of expected value	Correct problem and verify second source standard. Rerun ICV. If that fails, correct problem and repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until the calibration has been verified.
Calibration blank	Before beginning a sample run, after every 10 samples and at end of the analysis sequence	No analytes detected > 2X MDL	Correct problem then analyze calibration blank and previous 10 samples.	Apply B-flag to all associated positive results as appropriate. See guidance Section 8.2.1.4.
CCV	After every 10 samples and at the end of the analysis sequence	Analyte within ± 20% of expected value	Correct problem then repeat CCV and reanalyze all samples since last successful calibration verification.	Apply Q-flag to all samples associated with the calibration verification.
Method blank	One per analytical batch	No analytes detected > ½ RL	Assess data. Correct problem. If necessary, reprep and analyze method blank and all samples processed with the contaminated blank.	Apply B-flag to all associated positive results as appropriate. See guidance Section 8.2.1.4.
Dilution Test	Each matrix in a analytical batch (only applicable for samples with concentrations ≥25X MDL)	Fivefold (1+4) dilution must agree within ± 10% of the original determination	None	Apply J-flag to all sample results if batch had sample(s) with concentrations ≥25X MDL and either of following exist: (1) dilution test not run or (2) % D ≥ 10
LCS	One LCS per analytical batch	Acceptance criteria: Table 7.2.7.4-2	Correct problem then reanalyze. If still out, reprep and reanalyze the LCS and all samples in the affected AFCEE batch.	If corrective action fails, apply Q-flag to all samples in the associated preparatory batch.

TABLE 7.2.7.3-3
Summary of Calibration and QC Procedures for Methods SW7470A/SW7471A
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
MS/MSD	One MS/MSD per every 20 Air Force project samples per matrix	Acceptance criteria: Table 7.2.7.4-2	Assess data to determine whether there is a matrix effect or analytical error. Analyze LCS for failed target analytes. Potential matrix effects should be communicated to CH2M HILL so an evaluation can be made with respect to the PQOs.	For all samples collected from the same site matrix as the parent, apply M-flag if: (1) %R for MS or MSD > UCL, (2) %R for MS or MSD < LCL, or (3) MS/MSD RPD > CL
MDL study	At initial setup and subsequently once per 12-month period or quarterly MDL verification checks.	Detection limits established shall be ≤ ½ the RLs in Acceptance Criteria, Table 7.2.7.4-1. See 40 CFR, Part 136 Appendix B. Verification checks must produce a response at least 3X instrument noise level and must produce a response greater than the blanks associated with the MDL study.	Run MDL verification check at higher level and set higher MDL or reconduct MDL study.	N/A
Results reported between MDL and RL	None	None	None	Apply F-flag to all results between MDL and RL.

a All corrective actions associated with AFCEE project work shall be documented, and all records shall be maintained by the laboratory.

b Flagging criteria are applied when acceptance criteria were not met and corrective action was not successful or corrective action was not performed.

Extractable TPH components, such as kerosene, diesel, motor oil, and other high molecular-weight extractable petroleum products, are typically prepared by Method SW3520C or SW3510C for water-based matrices or by Method SW3550B for soil/sludge matrices. Other extraction options are listed in Table 7.2.1. After the sample is extracted, analysis is accomplished on a GC equipped with a capillary or megabore column and a FID. RLs for volatile TPH and extractable TPH are provided in Table 7.2.1.1-1.

TABLE 7.2-1
Analytical Methods
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analytical Method	Parameter	Preparation Methods	
		Water/Aqueous	Soil/Solid
GC			
SW8015B	TPH volatiles	5030B, 5031	5035A
SW8015B	TPH extractables	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8081A	Organochlorine pesticides	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8082	PCBs	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8141A	Organophosphorus compounds	3510C, 3520C, 3535	3540C, 3541, 3545
SW8151A	Chlorinated herbicides	see analytical method	see analytical method
RSK-175	Soil gases in water	see analytical method	N/A
GC/MS			
SW8260B	Volatile organics	5030B, 5031, 5032	3585, 5021, 5032, 5035A
SW8270C	Semivolatile organics	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
TO-14A/TO-15	Volatile Organics in Air	N/A	N/A
GC/MS SIM			
SW8270C SIM	PAHs	3510C, 3520C	3540C, 3541, 3545, 3550B
HRGC/LRMS			
SW8280	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HRGC/HRMS			
SW8290	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HPLC			
SW8330	Explosives residues	see analytical method	see analytical method
HPLC/MS & HPLC/MS/MS			
SW8321A	Chlorinated herbicides by HPLC-MS	3510C, 3520C	3540C, 3541, 3550B
SW8321A (Mod)	Explosives by HPLC-MS	3535A	3550B
SW8321A (Mod)	Perchlorate by HPLC-MS-MS	see analytical method	see analytical method
ICP-AES/ICP-MS/GFAA/CVAA			
SW6010B	Trace metals by ICP-AES	3005A, 3010A, 3015	3050B, 3051
SW6020	Trace metals by ICP-MS	3005A, 3010A, 3015	3050B, 3051
SW7470A	Mercury (water)	see analytical method	N/A
SW7471A	Mercury (soil)	N/A	See analytical method
Wet Chemistry			
SW7196A	Hexavalent chromium	see analytical method	3060A
SW9010B	Total and Amenable Cyanide (distillation)	see analytical method	9013
SW9012A	Total and Amenable Cyanide (colorimetric)	see analytical method	9013
SW9056	Common anions	see analytical method	As per EPA 300.0

* (8) Method 6010B or 6020 may be substituted for the analysis of this analyte as long as the AFCEE RL can be met. If used, all 6010B or 6020 quality control criteria must be met.

Identification and quantitation of TPH components require more analytical judgment than other GC methods. The TPH chromatograms consist of groups of peaks that fall within a

TABLE 5.1.2-1
Requirements for Containers, Preservation, and Holding Times
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Parameter	Analytical Methods	Sample Container		Preservation		Holding Time	
		Aqueous	Solid	Aqueous	Solid	Aqueous	Solid
Explosive residues	SW8330 SW8321A (mod)	2 X 1-Liter amber glass bottles with PTFE-lined caps	250 mL wide-mouth glass jar	No residual chlorine Cool to 4°C Residual chlorine 1 mL 10% Na2S2O3 per Liter of water (0.008%), Cool to 4°C	Cool to 4°C	7 days until extraction and extracts analyzed within 40 days after extraction. Store extract in dark until analysis	14 days until extraction and extracts analyzed within 40 days after extraction. Store extract in dark until analysis
PCB congeners	EPA 1668 modified or SW8082 Modified	1 Liter glass or HDPE bottle	250 mL wide-mouth glass jar	Cool to 4°C	Cool to 4°C	1 year	1 year
Metals (except Cr+6 and Hg)	SW6010B SW6020	1 Liter glass or HDPE bottle	250 mL wide-mouth glass jar	HNO3 to pH < 2	Cool to 4°C	180 days	180 days
Chromium (VI)	SW7196A	250 mL glass or HDPE bottle	250 mL wide-mouth glass jar	Cool to 4°C	Cool to 4°C	24 hours	30 days to extraction and extracts analyzed within 4 days
Mercury	SW7470A (aqueous) SW7471A (solid)	250 mL glass or HDPE bottle	250 mL wide-mouth glass jar	HNO3 to pH < 2	Cool to 4°C	28 days	28 days

TABLE 7.1-1
Sample Preparation and Cleanup Methods
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Method	Parameter
SW3050B	Acid Digestion of Solids, Sediments, and Sludges for Metals Analysis
SW3051	Microwave Assisted Acid Digestion of Solids, Sediments, and Sludges for Metals Analysis
SW3060A	Alkaline Digestion for Hexavalent Chromium in sediment, sludge, and soil samples
SW7196A [c]	Hexavalent Chromium (prep in aqueous samples)
SW7470A [c]	Mercury (prep for aqueous samples)
SW7471A [c]	Mercury (prep for solid samples)
Leaching Procedures	
SW1311	Toxicity Characteristic Leaching Procedure (aqueous and solid samples)
SW1312	Synthetic Precipitation Leaching Procedure (aqueous and solid samples)
Other	
EPA 300.0	Common Anions (in soil)
SW9056 [c]	Common anions (in aqueous samples)
SW9010B [c]	Total and Amenable Cyanide (distillation) (prep for aqueous samples)
SW9012A [c]	Total and Amenable Cyanide (colorimetric) (prep for aqueous samples)
SW9013 [c]	Total and Amenable Cyanide (prep for solid samples)
EPA 314.0 [c]	Perchlorate Ion (in aqueous samples)
Cleanup	
SW3610B	Alumina Cleanup Adsorption
SW3620B	Florisil Cleanup Adso
SW3630C	Silica Gel Cleanup Adsorption
SW3640A	Gel-Permeation Cleanup (GPC) Size-Separation
SW3650B	Acid-Base Partition Cleanup Acid-Base Partitioning
SW3660B	Sulfur Cleanup Oxidation/Reduction
SW3665A	Sulfuric Acid/Permanganate Oxidation/Reduction Cleanup

a Although method has not been promulgated, its use has received widespread use and acceptance.
b Although method has not been promulgated, its use is recommended, especially for the extraction of explosives.
c Follow the preparation procedure as detailed in the individual determinative method.

7.1.1 Method SW5030B—Purge and Trap for Volatile Organic Compounds

Method SW5030B describes sample preparation and extraction for the analysis of VOCs. This method is applicable to aqueous samples and soil/sediment extracts.

An inert gas is then bubbled through the sample solution at ambient temperature to transfer the volatile components to the vapor phase. The vapor is swept through a sorbent column where the volatile components are trapped. After purging is completed, the sorbent column is heated and back flushed with inert gas to desorb the components onto a GC column.

7.2.2.2 Method SW8270C—Semivolatile Organics

SVOCs (also known as base/neutral and acid extractables) in water and soil samples are analyzed using Method SW8270C. This technique quantitatively determines the concentration of a number of SVOCs. Samples are extracted and both base/neutral and acid extracts are then concentrated through evaporation. Compounds of interest are separated and quantified using a capillary column GC/MS. The analytes and RLs for this method are listed in Table 7.2.2.2-1.

Tuning—The mass spectrometer must be hardware tuned to give an acceptable spectrum for decafluorotriphenylphosphine (DFTPP). The tuning acceptance criteria are given in the following list in terms of ion abundances for each specified mass:

- mass 51 30-60 percent of mass 198
- mass 68 less than 2 percent of mass 69
- mass 70 less than 2 percent of mass 69
- mass 127 40-60 percent of mass 198
- mass 197 less than 1 percent of mass 198
- mass 198 base peak, 100 percent relative abundance
- mass 199 5-9 percent of mass 198
- mass 275 10-30 percent of mass 198
- mass 365 greater than 1 percent of mass 198
- mass 441 present, but less than mass 443
- mass 442 greater than 40 percent of mass 198
- mass 443 17-23 percent of mass 442

These criteria must be demonstrated each 12-hour shift during which samples are analyzed. No analyses may begin until these criteria are met.

The IS method is used for quantitation of analytes of interest. For quantitation, RFs are calculated from the base ion peak of a specific IS that is added to each calibration standard, blank, QC sample, and sample. Table 7.2.2.2-2 provides acceptance criteria for accuracy of spiked analytes and ISs, precision of duplicate/replicate analyses, and recommended IS associations. Also included in Table 7.2.2.2-2 are the ME limits taken from the DoD QSM. AFCEE has set a policy that the minimum upper acceptance limits for LCS recoveries for aqueous and soil samples are 120 percent and 125 percent, respectively. For this reason, the upper LCS control limits and marginal exceedances limits are the same for some analytes. Table 7.2.2.4-1 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria.

TABLE 7.2.2.2-1
Reporting Limits for Method SW8270C—Semivolatile Organics
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Water		Soil	
	RL	Unit	RL	Unit
Base/Neutral Extractables				
1,2,4-Trichlorobenzene	10	µg/L	0.7	mg/kg
1,2-DCB	10	µg/L	0.7	mg/kg
1,3-DCB	10	µg/L	0.7	mg/kg
1,4-DCB	10	µg/L	0.7	mg/kg
2,4-DNT	10	µg/L	0.7	mg/kg
2,6-DNT	10	µg/L	0.7	mg/kg
2-Chloronaphthalene	10	µg/L	0.7	mg/kg
2-Methylnaphthalene	10	µg/L	0.7	mg/kg
2-Nitroaniline	50	µg/L	3.3	mg/kg
3-Nitroaniline	50	µg/L	3.3	mg/kg
3,3'-Dichlorobenzidine	20	µg/L	1.3	mg/kg
4-Bromophenyl phenyl ether	10	µg/L	0.7	mg/kg
4-Chloroaniline	20	µg/L	1.3	mg/kg
4-Chlorophenyl phenyl ether	10	µg/L	0.7	mg/kg
4-Nitroaniline	50	µg/L	3.3	mg/kg
Acenaphthylene	10	µg/L	0.7	mg/kg
Acenapthene	10	µg/L	0.7	mg/kg
Anthracene	10	µg/L	0.7	mg/kg
Benzo(a)anthracene	10	µg/L	0.7	mg/kg
Benzo(a)pyrene	10	µg/L	0.7	mg/kg
Benzo(k)fluoranthene	10	µg/L	0.7	mg/kg
Benzo(b)fluoranthene	10	µg/L	0.7	mg/kg
Benzo(g,h,i)perylene	10	µg/L	0.7	mg/kg
Benzyl alcohol	20	µg/L	1.3	mg/kg
Bis(2-chloroethoxy)methane	10	µg/L	0.7	mg/kg
Bis(2-chloroethyl) ether	10	µg/L	0.7	mg/kg
Bis(2-chloroisopropyl) ether	10	µg/L	0.7	mg/kg
Bis(2-ethylhexyl) phthalate	10	µg/L	0.7	mg/kg
Butyl benzyl phthalate	10	µg/L	0.7	mg/kg
Chrysene	10	µg/L	0.7	mg/kg
Di-n-butyl phthalate	10	µg/L	0.7	mg/kg
Di-n-octyl phthalate	10	µg/L	0.7	mg/kg
Dibenzo(a,h)anthracene	10	µg/L	0.7	mg/kg
Dibenzofuran	10	µg/L	0.7	mg/kg
Diethyl phthalate	10	µg/L	0.7	mg/kg
Dimethyl phthalate	10	µg/L	0.7	mg/kg
Fluoranthene	10	µg/L	0.7	mg/kg
Fluorene	10	µg/L	0.7	mg/kg
Hexachlorobenzene	10	µg/L	0.7	mg/kg
Hexachlorobutadiene	10	µg/L	0.7	mg/kg
Hexachloroethane	10	µg/L	0.7	mg/kg
Indeno(1,2,3-cd)pyrene	10	µg/L	0.7	mg/kg
Isophorone	10	µg/L	0.7	mg/kg
N-Nitrosodiphenylamine	10	µg/L	0.7	mg/kg
N-Nitrosodi-n-propylamine	10	µg/L	0.7	mg/kg
Naphthalene	10	µg/L	0.7	mg/kg
Nitrobenzene	10	µg/L	0.7	mg/kg

TABLE 7.2.2.2-1
Reporting Limits for Method SW8270C—Semivolatile Organics
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Water		Soil	
	RL	Unit	RL	Unit
Phenanthrene	10	µg/L	0.7	mg/kg
Pyrene	10	µg/L	0.7	mg/kg
Acid Extractables				
2,4,5-Trichlorophenol	50	µg/L	3.3	mg/kg
2,4,6-Trichlorophenol	10	µg/L	0.3	mg/kg
2,4-Dichlorophenol	10	µg/L	0.3	mg/kg
2,4-Dimethylphenol	10	µg/L	0.3	mg/kg
2,4-Dinitrophenol	50	µg/L	3.3	mg/kg
2-Chlorophenol	10	µg/L	0.3	mg/kg
2-Methylphenol	10	µg/L	0.3	mg/kg
2-Nitrophenol	10	µg/L	0.3	mg/kg
4,6-Dinitro-2-methylphenol	50	µg/L	3.3	mg/kg
4-Chloro-3-methylphenol	20	µg/L	1.3	mg/kg
4-Methylphenol	50	µg/L	2.0	mg/kg
4-Nitrophenol	50	µg/L	1.6	mg/kg
Benzoic acid	100	µg/L	5.0	mg/kg
Pentachlorophenol	50	µg/L	3.3	mg/kg
Phenol	10	µg/L	0.3	mg/kg

TABLE 7.2.2.2-2
QC Acceptance Criteria for Method SW8270C—Semivolatile Organics
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Accuracy Water (% R)	Precision Water RPD (%)	ME Limits Water (% R)	Accuracy Soil (% R)	Precision Soil RPD (%)	ME Limits Soil (% R)	Assoc. IS	Assoc. Sur.
1,2,4-Trichlorobenzene	37–120	≤ 20	25-120	44–125	≤ 30	30-125	2	4
1,2-DCB	33–120	≤ 20	20-120	45–125	≤ 30	35-125	1	4
1,3-DCB	32–120	≤ 20	20-120	39–125	≤ 30	30-125	1	4
1,4-DCB	32–120	≤ 20	20-120	35–125	≤ 30	25-125	1	4
2,4-DNT	51–120	≤ 20	40-130	48–125	≤ 30	35-130	3	2
2,6-DNT	49–120	≤ 20	35-130	48–125	≤ 30	35-125	3	2
2-Chloronaphthalene	49–120	≤ 20	40-120	45–125	≤ 30	35-125	3	2
2-Methylnaphthalene	46–120	≤ 20	35-120	47–125	≤ 30	35-125	2	2
2-Nitroaniline	48–120	≤ 20	35-125	44–125	≤ 30	30-130	3	2
3,3'-Dichlorobenzidine	20–120	≤ 20	10-125	25–128	≤ 30	0-145	5	2
3-Nitroaniline	20–126	≤ 20	10-145	27–125	≤ 30	15-125	3	2
4-Bromophenyl phenyl ether	52–120	≤ 20	40-125	46–125	≤ 30	35-130	4	2
4-Chloroaniline	20–120	≤ 20	10-125	25–125	≤ 30	0-125	2	4
4-Chlorophenyl phenyl ether	50–120	≤ 20	40-120	47–125	≤ 30	35-125	3	2
4-Nitroaniline	36–120	≤ 20	20-130	34–125	≤ 30	20-125	3	2
Acenaphthene	47–120	≤ 20	35-120	46–125	≤ 30	35-125	3	6
Acenaphthylene	50–120	≤ 20	40-120	44–125	≤ 30	35-125	3	6
Anthracene	54–120	≤ 20	45-120	53–125	≤ 30	45-125	4	6
Benzo(a)anthracene	56–120	≤ 20	45-120	52–125	≤ 30	40-125	5	6
Benzo(a)pyrene	53–120	≤ 20	45-120	50–125	≤ 30	40-125	6	6
Benzo(b)fluoranthene	45–124	≤ 20	35-130	45–125	≤ 30	35-125	6	6
Benzo(g,h,i)perylene	38–123	≤ 20	25-135	38–126	≤ 30	25-140	6	6
Benzo(k)fluoranthene	45–124	≤ 20	30-125	45–125	≤ 30	30-135	6	6
Benzyl alcohol	30–120	≤ 20	15-125	25–125	≤ 30	10-140	1	4
Bis(2-chloroethoxy)methane	46–120	≤ 20	35-120	43–125	≤ 30	30-125	2	4
Bis(2-chloroethyl) ether	37–120	≤ 20	25-120	38–125	≤ 30	25-125	1	4
Bis(2-chloroisopropyl) ether	26–131	≤ 20	10-150	25–125	≤ 30	10-130	1	4
Bis(2-ethylhexyl) phthalate	42–126	≤ 20	30-140	47–127	≤ 30	35-140	5	2
Butyl benzyl phthalate	46–120	≤ 20	35-130	49–125	≤ 30	35-135	5	2
Chrysene	55–120	≤ 20	45-120	53–125	≤ 30	45-125	5	6
Di-n-butyl phthalate	54–120	≤ 20	45-125	56–125	≤ 30	45-125	4	2
Di-n-octyl phthalate	37–137	≤ 20	20-155	41–132	≤ 30	25-145	5	2
Dibenzo(a,h)anthracene	42–127	≤ 20	30-140	41–125	≤ 30	25-140	6	2
Dibenzofuran	54–120	≤ 20	45-120	51–125	≤ 30	40-125	3	2
Diethyl phthalate	41–120	≤ 20	30-130	50–125	≤ 30	40-125	3	2
Dimethyl phthalate	25–127	≤ 20	10-145	49–125	≤ 30	40-125	3	2
Fluoranthene	54–120	≤ 20	45-125	54–125	≤ 30	45-125	4	6
Fluorene	50–120	≤ 20	40-120	49–125	≤ 30	40-125	3	6
Hexachlorobenzene	52–120	≤ 20	40-120	47–125	≤ 30	35-130	4	2
Hexachlorobutadiene	27–120	≤ 20	15-120	40–125	≤ 30	25-130	2	4
Hexachloroethane	28–120	≤ 20	15-120	34–125	≤ 30	20-125	1	4
Indeno(1,2,3-c,d)pyrene	43–125	≤ 20	30-140	38–125	≤ 30	25-135	5	6
Isophorone	50–120	≤ 20	40-125	43–125	≤ 30	30-125	2	4
N-Nitrosodi-n-propylamine	34–128	≤ 20	20-145	40–125	≤ 30	30-125	1	4

TABLE 7.2.2.2-2
QC Acceptance Criteria for Method SW8270C—Semivolatile Organics
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Accuracy Water (% R)	Precision Water RPD (%)	ME Limits Water (% R)	Accuracy Soil (% R)	Precision Soil RPD (%)	ME Limits Soil (% R)	Assoc. IS	Assoc. Sur.
N-Nitrosodiphenylamine	48–120	≤ 20	35-120	49–125	≤ 30	40-125	4	2
Naphthalene	39–120	≤ 20	30-120	40–125	≤ 30	30-125	2	6
Nitrobenzene	44–120	≤ 20	35-120	41–125	≤ 30	30-125	2	4
Phenanthrene	51–120	≤ 20	40-130	50–125	≤ 30	40-125	4	6
Pyrene	49–128	≤ 20	35-140	46–125	≤ 30	35-135	5	6
2,4,5-Trichlorophenol	49–120	≤ 20	40-120	49–125	≤ 30	40-125	3	1
2,4,6-Trichlorophenol	49–126	≤ 20	40-125	43–125	≤ 30	30-125	3	1
2,4-Dichlorophenol	48–120	≤ 20	40-120	45–125	≤ 30	35-125	2	3
2,4-Dimethylphenol	28–120	≤ 20	15-125	32–125	≤ 30	20-125	2	3
2,4-Dinitrophenol	25–130	≤ 20	10-160	25–132	≤ 30	10-150	3	1
2-Chlorophenol	37–120	≤ 20	25-120	44–125	≤ 30	35-125	1	3
2-Methylphenol	38–120	≤ 20	25-120	40–125	≤ 30	30-125	1	3
2-Nitrophenol	39–123	≤ 20	25-125	42–125	≤ 30	30-125	2	3
4,6-Dinitro-2-methylphenol	40–130	≤ 20	25-145	29–137	≤ 30	10-155	4	1
4-Chloro-3-methylphenol	47–120	≤ 20	35-120	46–125	≤ 30	35-125	2	1
4-Methylphenol	32–120	≤ 20	20-125	41–125	≤ 30	30-125	1	3
4-Nitrophenol	20–120	≤ 20	0-145	25–138	≤ 30	10-160	3	1
Benzoic Acid	20–120	≤ 20	0-150	25–125	≤ 30	0-130	2	3
Pentachlorophenol	38–120	≤ 20	25-130	25–125	≤ 30	10-135	4	1
Phenol	20–120	≤ 20	0-135	39–125	≤ 30	30-125	1	5
Surrogates:								
2,4,6-Tribromophenol	42–124	-	-	36–126	-	-	3	1
2-Fluorobiphenyl	48–120	-	-	43–120	-	-	3	2
2-Fluorophenol	20–120	-	-	37–120	-	-	1	3
Nitrobenzene-*d5*	41–120	-	-	37–120	-	-	2	4
Phenol-*d5*	20–120	-	-	40–120	-	-	1	5
Terphenyl-*d14*	51–135	-	-	32–120	-	-	5	6
ISs:								
1,4-Dichlorobenzene-*d4*	-	-	-	-	-	-	1	-
Naphthalene-*d8*	-	-	-	-	-	-	2	-
Acenaphthene-*d10*	-	-	-	-	-	-	3	-
Phenanthrene-*d10*	-	-	-	-	-	-	4	-
Chrysene-*d12*	-	-	-	-	-	-	5	-
Perylene-*d12*	-	-	-	-	-	-	6	-

TABLE 7.2.2.4-1
Summary of Calibration and QC Procedures for Methods SW8260B and SW8270C
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
MS tuning check Use BFB (SW 8260B) or DFTPP (SW 8270C)	Before initial calibration and calibration verification	Refer to criteria listed in the method description. (Section 7.2.2.1 for SW8260B, Section 7.2.2.2 for SW8270C)	Retune instrument and verify.	Not appropriate
GC Performance Check (8270C only)	Daily before analysis of sample or calibration standards	Degradation ≤ 20% for DDT. No visible peak tailing for benzidine or pentachlorophenol (As a default, tailing factors should be less than 3.0 and 5.0, respectively.)	Correct problem, then repeat performance check.	Not appropriate
Initial multipoint calibration for all analytes (minimum five standards) (ICAL)	Initial calibration before sample analysis	**SPCCs**: Average RF ≥ 0.30 [c] (SW8260B), ≥ 0.050 (SW8270C) Calibration check compounds **(CCCs):** % RSD for RFs ≤ 30% **and** one of the options below: *Option 1*: linear—RSD for each analyte < 15% *Option 2 linear*—linear least squares regression r ≥ 0.995 for each analyte *Option 3 non-linear*—COD ≥ 0.99 (6 points shall be used for second order, 7 points shall be used for third order)	Correct problem then repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until there is a valid ICAL.
Second-source calibration verification	Once per ICAL	All analytes within ± 25% of expected value	Correct problem and verify second source standard. Rerun second source verification. If that fails, correct problem and repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until the calibration has been verified.
Retention time window position establishment for each analyte and surrogate	Once per ICAL	Position shall be set using the midpoint standard of the initial calibration curve.	N/A	N/A

TABLE 7.2.2.4-1
Summary of Calibration and QC Procedures for Methods SW8260B and SW8270C
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
Retention time window verified for each analyte	Each sample.	Relative retention time (RRT) of the analyte within ± 0.06 RRT units of ICAL	Correct problem then reanalyze all samples analyzed since the last retention time check.	Apply Q-flag to all results for the specific analyte(s) in the sample which are outside the established window.
CCV	Daily, before sample analysis unless ICAL performed on same day and after every 12 hours of analysis time	**SPCCs:** average RF ≥ 0.30c (SW8260B), average RF ≥ 0.050 (SW8270C); **CCCs:** ≤ 20% D All analytes within ± 20% D of expected value from ICAL **Note:** D = difference when using RFs or drift when using least squares, regression or non-linear calibration.	Correct problem then rerun CCV. If that fails, repeat initial calibration.	Apply Q-flag to all results for the specific analyte(s) > 20% D for all samples associated with the calibration verification.
ISs	Each sample	Retention time ± 30 seconds from retention time of the IS in the ICAL mid-point std. Extracted ion current profile (EICP) area within -50% to +100% of area from IS in ICAL mid-point standard	Inspect mass spectrometer and GC for malfunctions and corrections made as appropriate. Reanalysis of samples analyzed while the system was malfunctioning is mandatory.	Apply Q-flag to all results for analytes associated with a failed IS unless a matrix effect can be verified, then apply M-flag.
Method blank	One per analytical batch	No analytes detected > ½ RL For common lab contaminants no analytes detected > RL	Assess data. Correct problem. If necessary, reprep and analyze method blank and all samples processed with the contaminated blank.	Apply B-flag to all associated positive results for the specific analyte(s) as appropriate. See guidance Section 8.2.1.4.
LCS for all analytes	One LCS per analytical batch	Acceptance criteria: Tables 7.2.2.1-2 and 7.2.2.2-2 See Section 4.4.1.2 for guidance on determining marginal exceedances.	Correct problem then reanalyze. If still out, reprep and reanalyze the LCS and all samples in the affected AFCEE batch.	If corrective action fails, apply Q-flag to the specific analyte(s) which are not marginal exceedances in all samples in the associated preparatory batch.

TABLE 7.2.2.4-1
Summary of Calibration and QC Procedures for Methods SW8260B and SW8270C
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
MS/MSD	One MS/MSD per every 20 Air Force project samples per matrix	Acceptance criteria: Tables 7.2.2.1-2 and 7.2.2.2-2	Assess data to determine whether there is a matrix effect or analytical error. Analyze LCS for failed target analytes. Potential matrix effects should be communicated to CH2M HILL so an evaluation can be made with respect to the PQOs.	For the specific analyte(s) in all samples collected from the same site matrix as the parent, apply M-flag if: (1) %R for MS or MSD > UCL, (2) %R for MS or MSD < LCL, or (3) MS/MSD RPD > CL
Surrogate spike	Every sample, spiked sample, standard, and method blank	Acceptance criteria: Tables 7.2.2.1-2 and 7.2.2.2-2	Correct problem then reprep and reanalyze the affected samples. If matrix effect is verified, discuss in case narrative.	For the samples: If the %R > UCL for any surrogate, apply J-flag to all positive results for associated analytes. If the %R < LCL for any surrogate, apply J-flag to all positive results for associated analytes and UJ -flag to all associated non-detects. If any surrogate recovery is <10%, apply Q-flag to all results for all associated analytes.
MDL study	At initial setup and subsequently once per 12-month period or quarterly MDL verification checks.	Detection limits established shall be ≤ ½ the RLs in Tables 7.2.2.1-1 and 7.2.2.2-1. See 40 CFR, Part 136 Appendix B. All analytes must be detected and identified by method-specified criteria for the for the verification check to be valid.	Run MDL verification check at higher level and set higher MDL or reconduct MDL study.	N/A
Results reported between MDL and RL	None	None	None	Apply F-flag to all results between MDL and RL.

a All corrective actions associated with AFCEE project work shall be documented, and all records shall be maintained by the laboratory.

b Flagging criteria are applied when acceptance criteria were not met and corrective action was not successful or corrective action was not performed.

c SW8260B:RF, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.

TABLE 5.1.2-1
Requirements for Containers, Preservation, and Holding Times
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Parameter	Analytical Methods	Sample Container		Preservation		Holding Time	
		Aqueous	Solid	Aqueous	Solid	Aqueous	Solid
Methane/Soil Gas	RSK-175	3 X 40 mL glass VOA vials with PTFE septum caps	3 X 60 or 125 mL glass vials with PTFE septum caps	Cool to 4°C	Cool to 4°C	14 days	N/A
Air VOCs	TO-14A, TO-15	SUMMA® canister or equivalent	N/A	N/A	N/A	30 days (air sample)	N/A
Extractable Organics							
Semivolatile organics 1,4-Dioxane	SW8270C SW8270C SIM	2 X 1-Liter amber glass bottles with PTFE-lined lids per parameter	250 mL amber glass wide-mouth jar (or can be clear if stored in dark) **Note**: All parameters can be taken from same jar	<u>No residual chlorine</u> Cool to 4°C <u>Residual chlorine</u> 1 mL 10% $Na_2S_2O_3$ per Liter of water (0.008%), Cool to 4°C	Cool to 4°C	7 days until extraction and extracts analyzed within 40 days after extraction	14 days until extraction and extracts analyzed within 40 days after extraction

TABLE 5.1.2-1
Requirements for Containers, Preservation, and Holding Times
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Parameter	Analytical Methods	Sample Container		Preservation		Holding Time	
		Aqueous	Solid	Aqueous	Solid	Aqueous	Solid
Organochlorine pesticides	SW8081A						
PCBs	SW8082						
Chlorinated Herbicides	SW8151A/ SW8321A						
Polynuclear Aromatic Hydrocarbons (PAHs)	SW8270C SIM						
TPH-extractable (DRO)	SW8015B						
Extractable petroleum hydrocarbons (EPH) fractional analyses	NWTPH-EPH						

Extractable TPH components, such as kerosene, diesel, motor oil, and other high molecular-weight extractable petroleum products, are typically prepared by Method SW3520C or SW3510C for water-based matrices or by Method SW3550B for soil/sludge matrices. Other extraction options are listed in Table 7.2.1. After the sample is extracted, analysis is accomplished on a GC equipped with a capillary or megabore column and a FID. RLs for volatile TPH and extractable TPH are provided in Table 7.2.1.1-1.

TABLE 7.2-1
Analytical Methods
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analytical Method	Parameter	Preparation Methods	
		Water/Aqueous	Soil/Solid
GC			
SW8015B	TPH volatiles	5030B, 5031	5035A
SW8015B	TPH extractables	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8081A	Organochlorine pesticides	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8082	PCBs	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8141A	Organophosphorus compounds	3510C, 3520C, 3535	3540C, 3541, 3545
SW8151A	Chlorinated herbicides	see analytical method	see analytical method
RSK-175	Soil gases in water	see analytical method	N/A
GC/MS			
SW8260B	Volatile organics	5030B, 5031, 5032	3585, 5021, 5032, 5035A
SW8270C	Semivolatile organics	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
TO-14A/TO-15	Volatile Organics in Air	N/A	N/A
GC/MS SIM			
SW8270C SIM	PAHs	3510C, 3520C	3540C, 3541, 3545, 3550B
HRGC/LRMS			
SW8280	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HRGC/HRMS			
SW8290	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HPLC			
SW8330	Explosives residues	see analytical method	see analytical method
HPLC/MS & HPLC/MS/MS			
SW8321A	Chlorinated herbicides by HPLC-MS	3510C, 3520C	3540C, 3541, 3550B
SW8321A (Mod)	Explosives by HPLC-MS	3535A	3550B
SW8321A (Mod)	Perchlorate by HPLC-MS-MS	see analytical method	see analytical method
ICP-AES/ICP-MS/GFAA/CVAA			
SW6010B	Trace metals by ICP-AES	3005A, 3010A, 3015	3050B, 3051
SW6020	Trace metals by ICP-MS	3005A, 3010A, 3015	3050B, 3051
SW7470A	Mercury (water)	see analytical method	N/A
SW7471A	Mercury (soil)	N/A	See analytical method
Wet Chemistry			
SW7196A	Hexavalent chromium	see analytical method	3060A
SW9010B	Total and Amenable Cyanide (distillation)	see analytical method	9013
SW9012A	Total and Amenable Cyanide (colorimetric)	see analytical method	9013
SW9056	Common anions	see analytical method	As per EPA 300.0

* (8) Method 6010B or 6020 may be substituted for the analysis of this analyte as long as the AFCEE RL can be met. If used, all 6010B or 6020 quality control criteria must be met.

Identification and quantitation of TPH components require more analytical judgment than other GC methods. The TPH chromatograms consist of groups of peaks that fall within a

7.2 Determinative Methods

The analytical methods presented in this section are listed in Table 7.2-1. This section is organized by methodologies including, GC, GC/MS, GC/MS SIM, HPLC, HPLC/MS, HPLC/MS/MS, ICP-AES, ICP-MS, GFAA, and wet chemistry.

A brief description and two tables for each method are included in the following subsections. The first table presents the RLs for the default analytes in the method. The RLs are presented for both soil and water matrices. The analytes included in these tables are not all inclusive lists. Specific lists of analytes for each method should be determined by regulatory requirements and site specific information. The analytes in these tables should be used as defaults when no other target analyte list has been developed. The second table presents acceptance criteria for the accuracy of spiked analyte and surrogate recoveries. This table also presents acceptance criteria for the precision of MS, field duplicate, and laboratory duplicate samples.

An additional table presents the calibration and QC procedures for each of the combined methodologies (such as GC, GC/MS, HPLC, or HPLC/MS). Corrective actions and data flagging criteria are also included in this table. The first two columns in this table designate the QC check and minimum frequency that the check is to be preformed. The third column designates the acceptance criteria for each calibration and QC element, and the fourth column designates the corrective action in the event that a calibration or QC element does not meet the acceptance criteria. The last column designates the data flagging criteria that shall be applied by the laboratory in the event that the method-required calibration and QC acceptance criteria or acceptance criteria are not met. It should be clearly understood that these are laboratory data qualifiers. If a laboratory has more and they are consistent with these and properly defined, the laboratory may use them. When other flags are required contractually, they shall be used. Data usability should be carefully assessed by an individual experienced in data review who represents the data user or the user's agent.

It should be clearly understood that each analyst must demonstrate his or hers ability to generate acceptable accuracy and precision using at least four replicate analyses of a QC check sample. If the acceptance criteria are not met, then the problem must be located and fixed and demonstration successfully rerun before the analyst analyzing project samples. All data analyzed by an unqualified analyst (that is, failing to meet QC criteria) shall be flagged R.

7.2.1 Gas Chromatography Methods

7.2.1.1 Method SW8015B—Volatile and Extractable Total Petroleum Hydrocarbons

Volatile TPH components, such as gasoline, jet fuel, and other low molecular weight petroleum products, are analyzed by the direct purge and trap technique described in Method SW5030B followed by a modified approach to Method SW8015B. Extractable petroleum hydrocarbon components are analyzed by extraction followed by GC analysis.

For volatile TPH, the sample is placed in the purge and trap sparge vessel and analysis is conducted using a GC equipped with a FID.

Extractable TPH components, such as kerosene, diesel, motor oil, and other high molecular-weight extractable petroleum products, are typically prepared by Method SW3520C or SW3510C for water-based matrices or by Method SW3550B for soil/sludge matrices. Other extraction options are listed in Table 7.2.1. After the sample is extracted, analysis is accomplished on a GC equipped with a capillary or megabore column and a FID. RLs for volatile TPH and extractable TPH are provided in Table 7.2.1.1-1.

TABLE 7.2-1
Analytical Methods
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analytical Method	Parameter	Preparation Methods	
		Water/Aqueous	Soil/Solid
GC			
SW8015B	TPH volatiles	5030B, 5031	5035A
SW8015B	TPH extractables	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8081A	Organochlorine pesticides	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8082	PCBs	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8141A	Organophosphorus compounds	3510C, 3520C, 3535	3540C, 3541, 3545
SW8151A	Chlorinated herbicides	see analytical method	see analytical method
RSK-175	Soil gases in water	see analytical method	N/A
GC/MS			
SW8260B	Volatile organics	5030B, 5031, 5032	3585, 5021, 5032, 5035A
SW8270C	Semivolatile organics	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
TO-14A/TO-15	Volatile Organics in Air	N/A	N/A
GC/MS SIM			
SW8270C SIM	PAHs	3510C, 3520C	3540C, 3541, 3545, 3550B
HRGC/LRMS			
SW8280	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HRGC/HRMS			
SW8290	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HPLC			
SW8330	Explosives residues	see analytical method	see analytical method
HPLC/MS & HPLC/MS/MS			
SW8321A	Chlorinated herbicides by HPLC-MS	3510C, 3520C	3540C, 3541, 3550B
SW8321A (Mod)	Explosives by HPLC-MS	3535A	3550B
SW8321A (Mod)	Perchlorate by HPLC-MS-MS	see analytical method	see analytical method
ICP-AES/ICP-MS/GFAA/CVAA			
SW6010B	Trace metals by ICP-AES	3005A, 3010A, 3015	3050B, 3051
SW6020	Trace metals by ICP-MS	3005A, 3010A, 3015	3050B, 3051
SW7470A	Mercury (water)	see analytical method	N/A
SW7471A	Mercury (soil)	N/A	See analytical method
Wet Chemistry			
SW7196A	Hexavalent chromium	see analytical method	3060A
SW9010B	Total and Amenable Cyanide (distillation)	see analytical method	9013
SW9012A	Total and Amenable Cyanide (colorimetric)	see analytical method	9013
SW9056	Common anions	see analytical method	As per EPA 300.0

* (8) Method 6010B or 6020 may be substituted for the analysis of this analyte as long as the AFCEE RL can be met. If used, all 6010B or 6020 quality control criteria must be met.

Identification and quantitation of TPH components require more analytical judgment than other GC methods. The TPH chromatograms consist of groups of peaks that fall within a

noted carbon retention time range (that is, number of carbon atoms in the molecule). Standard fuel components are used to calibrate the instruments. The TPH results are reported in mg/kg or mg/L based on quantitation of the total area count for the GRO (that is, C6-C10) or the diesel range organics (that is, C10-C28) and residual range organics (that is, C28-C34). The retention time window shall be set such that the window encompasses only the C6 through C34 range of organics. Table 7.2.1.1-2 provides acceptance criteria for Method SW8015B. Table 7.2.1.7-1 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria. Second-column confirmation is not required.

TABLE 7.2.1.1-1
Reporting Limits for Method SW8015B
Volatile and Extractable Total Petroleum Hydrocarbons
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Water		Soil	
	RL	Unit	RL	Unit
Gasoline	0.1	mg/L	1	mg/kg
Diesel	1	mg/L	10	mg/kg
Jet Fuel (Jet A, JP-4, JP-8)	1	mg/L	10	mg/kg
Residual range	1	mg/L	10	mg/kg
Additional Targets Possible				
Ethylene glycol	100	mg/L	50	mg/kg
Propylene glycol	100	mg/L	50	mg/kg
Ethanol	100	mg/L	50	mg/kg

TABLE 7.2.1.1-2
QC Acceptance Criteria for Method SW8015B
Volatile and Extractable Total Petroleum Hydrocarbons
ERP QAPP for Multiple Projects for the 15th Airlift Wing

Analyte	Accuracy Water (% R)	Precision Water RPD (%)	Accuracy Soil (% R)	Precision Soil RPD (%)
TPH–GRO	67–136	≤ 30	57–146	≤ 50
Surrogates (choose 1):				
a,a,a-Trifluorotoluene	80–1114	-	60–140	-
Chlorobenzene	74–138	-	64–148	-
4-Bromofluorobenzene	75–125	-	60–140	-
TPH–Diesel Range Organics (DRO)	61–143	≤ 30	51–153	≤ 50
TPH–Jet Fuel	61–143	≤ 30	51–153	≤ 50
TPH-Residual Range Organics	60-140	≤ 30	50-150	≤ 50
Surrogates (choose 2):				
Octacosane	26–152	-	25–162	-
o-Terphenyl	57–132	-	47–142	-
Fluorobenzene	75–125	-	65–135	-
Tricontane	40–140	-	30–150	-
Additional Possible targets				
Ethylene glycol	70-130	≤ 30	50-150	≤ 50
Propylene glycol	70-130	≤ 30	50-150	≤ 50
Ethanol	70-130	≤ 30	50-150	≤ 50

7.2.1.2 Method SW8081A—Organochlorine Pesticides

Organochlorine pesticides in water and soil samples are analyzed using Method SW8081A. This analytical method involves the extraction of the samples. The pesticides are then separated and quantified by GC using an electron capture detector (ECD). RLs for this method are presented in Table 7.2.1.2-1. Table 7.2.1.2-2 provides QA acceptance criteria for Method SW8081A. Also included in Table 7.2.1.2-2 are the ME limits taken from the DoD QSM. Table 7.2.1.7-1 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria. Second-column confirmation is not required for the analysis of chlordane or toxaphene.

Table 7.2.1.7-1
Summary of Calibration and QC Procedures for
GC Methods SW8015B, SW8081A, SW8082, SW8141A, SW8151A, and RSK-175
ERP QAPP for Multiple Projects for the 15th Airlift Wing

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action[a]	Flagging Criteria[b]
Breakdown check (Endrin and DDT, Method SW8081A only)	Daily before analysis of sample	Degradation ≤ 15% for each analyte	Correct problem then repeat breakdown check.	Problem must be corrected. Samples shall not be run until degradation is ≤ 15%.
Initial multipoint calibration for all analytes (minimum five standards) (ICAL)	Initial calibration before sample analysis	One of the options below (except for Method 8082 which may only use Option 1 or 2): *Option 1*: linear—RSD for each analyte ≤ 20% *Option 2*: linear—least squares regression r ≥ 0.995 for each analyte. *Option 3*: non-linear—COD ≥ 0.99 (six points shall be used for second order, seven points shall be used for third order) not applicable for SW8082	Correct problem then repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until there is a valid ICAL.
Second-source calibration verification	Once after each ICAL	All analytes within ± 20% of expected value	Correct problem and verify second source standard. Rerun second source verification. If that fails, correct problem and repeat initial calibration.	Problem must be corrected. Samples may not be analyzed until the calibration has been verified.
Retention time window position established for each analyte and surrogate	Each ICAL and after the initial daily CCV	Position shall be set using the midpoint standard of the initial calibration curve.	N/A	N/A

Sources of Approved Analytical Methods for National Drinking Water Regulations

The following table provides contact information for organizations that are sources of approved drinking water methods that are not readily available on the Internet.

Organization *(Former Name)*	Approved Methods	Contact Information
ALPKEM A Division of OI Analytical	Method OIA-1677, DW	P.O. Box 9010 College Station, TX 77842-9010
AOAC International http://www.aoac.org	991.15	481 North Frederick Avenue, Suite 500 Gaithersburg, MD 20877-2417 301-924-7077
ASTM International (ASTM) http://www.astm.org *American Society for Testing and Materials*	D1125-91 A D1179-93 B D1293-84 D1293-95 D1688-90 A D1688-90 C D2459-72 D3559-90 D D3649-91 D3867-90 A D3867-90 B D4107-91 D4785-93 D515-88 A D516-90 D5317-93 D859-88 D859-94	100 Barr Harbor Drive West Conshohocken, PA 19428-2959 610-832-9585
Bran+Luebbe SEAL Analytical North America *Technicon Industrial Systems*	129-71W 380-75WE	Mequon Technical Center Mequon, WI 53092
Charm Sciences, Inc http://www.charm.com	E*Colite® Test	659 Andover Street Lawrence, MA 01843
CPI International, Inc. http://www.cpiinternational.com		5580 Skylane Blvd. Santa Rosa, CA 95403

Organization *(Former Name)*	Approved Methods	Contact Information
CPI International, Inc. http://www.cpiinternational.com	Colitag®	5580 Skylane Blvd. Santa Rosa, CA 95403
EMD Chemicals http://www.emdchemicals.com *EM Science*	Chromocult® Coliform Agar Readycult® Coliforms 100 Presence/Absence Test	480 S. Democrat Road Gibbstown, NJ 08027-1297 800-222-0342
Georgia Institute of Technology Environmental Resources Center	GA	620 Cherry Street Atlanta, GA 30332-0335
Great Lakes Instruments, Inc. http://www.gliint.com	Method 2	9020 West Dean Rd Milwaukee, WI 53224 414-355-3601
Hach Company http://www.hach.com	10133 Rev. 2.0 m-ColiBlue24® Test	P.O. Box 389 Loveland, CO 80539-0389 800-227-4224
IDEXX Laboratories, Inc. http://www.idexx.com	Colilert Colilert-18 Colisure Test Enterolert SimPlate®	One IDEXX Drive Westbrook, ME 04092 800-321-0207
Lachat Instruments	QuikChem 10-204-00-1-X, Revision 2.1	6645 W. Mill Road Milwaukee, WI 53218 414-358-4200
National Technical Information Service (NTIS) http://www.ntis.gov/products/types/publications.asp	1613 245.2 4.5.2.3 515.1 Rev 4.0 EPA 00-01 EPA 00-02 EPA 00-07 EPA 901.0 EPA 901.1	5285 Port Royal Road Springfield, VA 22161 800-553-6847

Organization *(Former Name)*	Approved Methods	Contact Information
National Technical Information Service (NTIS) http://www.ntis.gov/products/types/publications.asp	EPA 902.0 EPA 903.0 EPA 904.0 EPA 905.0 EPA 906.0 EPA 908.0 EPA 908.1 EPA H-02 EPA Ra-03 EPA Ra-04 EPA Ra-05 EPA Sr-04 Kelada 01, Revision 1.2 Page 1 in EMSL LV 053917 Page 1 in EPA 600/4-75-008 Page 13 in EPA 600/4-75-008 Page 16 in EPA 600/4-75-008 Page 19 in EMSL LV 053917 Page 24 in EPA 600/4-75-008 Page 29 in EPA 600/4-75-008 Page 33 in EMSL LV 053917 Page 34 in EPA 600/4-75-008 Page 4 in EPA 600/4-75-008 Page 6 in EPA 600/4-75-008 Page 65 in EMSL LV 053917 Page 87 in EMSL LV 053917 Page 9 in EPA 600/4-75-008 Page 92 in EMSL LV 053917 Ra-05 Sr-01 Sr-02 U-02 U-04	5285 Port Royal Road Springfield, VA 22161 800-553-6847
Palintest, Ltd. http://palintest.com	Method 1001	21 Kenton Lands Road Erlanger, KY 41018
Radiological Sci Inst Ctr for Lab & Research New York State Department of Health	NY	Empire State Plaza Albany, NY 12201
Standard Methods American Water Works Assn. Bookstore http://www.standardmethods.org/	2120 B 2130 B 2150 B	6666 West Quincy Avenue Denver, CO 80235 800-926-7337

Organization *(Former Name)*	Approved Methods	Contact Information
Standard Methods American Water Works Assn. Bookstore http://www.standardmethods.org/		6666 West Quincy Avenue Denver, CO 80235 800-926-7337
	2320 B	
	2510 B	
	2540 C	
	2550	
	302	
	303	
	304	
	305	
	306	
	3111 B	
	3111 D	
	3112 B	
	3113 B	
	3114 B	
	3120 B	
	3125	
	3500-Ca B	
	3500-Ca D	
	3500-Mg B	
	3500-Mg E	
	4110 B	
	4500-Cl- B	
	4500-Cl D	
	4500-Cl- D	
	4500-Cl E	
	4500-Cl F	
	4500-Cl G	
	4500-Cl H	
	4500-Cl I	
	4500-ClO2 C	
	4500-ClO2 D	
	4500-ClO2 E	
	4500-CN- C	
	4500-CN- E	
	4500-CN- F	
	4500-CN- G	
	4500-F- B	
	4500-F- C	
	4500-F- D	
	4500-F- E	
	4500-H+ B	
	4500-NO2- B	
	4500-NO3- D	
	4500-NO3- E	
	4500-NO3- F	
	4500-O3 B	
	4500-P E	
	4500-P F	
	4500-Si D	

Organization (*Former Name*)	Approved Methods	Contact Information
Standard Methods American Water Works Assn. Bookstore http://www.standardmethods.org/		6666 West Quincy Avenue Denver, CO 80235 800-926-7337
	4500-Si E	
	4500-Si F	
	4500-SiO2 C	
	4500-SiO2 D	
	4500-SiO2 E	
	4500-SO42- C	
	4500-SO42- D	
	4500-SO42- E	
	4500-SO42- F	
	5310 B	
	5310 C	
	5310 D	
	5540 C	
	5910 B	
	6251 B	
	6610 B	
	6651	
	7110 B	
	7110 C	
	7120	
	7500-3H B	
	7500-Cs B	
	7500-I B	
	7500-I C	
	7500-I D	
	7500-Ra B	
	7500-Ra C	
	7500-Ra D	
	7500-Sr B	
	7500-U B	
	7500-U C	
	9213 D	
	9215 B	
	9215 with R2A Medium	
	9221 A	
	9221 B	
	9221 B.1/9221 F	
	9221 C	
	9221 D	
	9221 E	
	9221 F	
	9222 A	
	9222 B	
	9222 B/9222 G	
	9222 C	
	9222 D	
	9222 D/9222 G	
	9222 G	
	9223	

Organization *(Former Name)*	Approved Methods	Contact Information
Standard Methods American Water Works Assn. Bookstore http://www.standardmethods.org/	9223/ONPG-MUG (Colilert) 9230 B 9230 C	6666 West Quincy Avenue Denver, CO 80235 800-926-7337
State of New Jersey Department of Environmental Protection Div of Environmental Quality,Bureau of Radiation & Inorganic Analytical Services	NJ	Trenton, NJ 08625
Syngenta Crop Protection, Inc.	Syngenta AG-625	410 Swing Road Greensboro, NC 27419 336-632-6000
Thermo Orion ATI Orion http://www.thermo.com	601	529 Main Street Boston, MA 02129
Waters Corporation Technical Services Division http://www.waters.com	B-1011 Method D6508, Revision 2	34 Maple Street Milford, MA 01757 800-252-4752

http://www.epa.gov/safewater/methods/analyticalmethods_ogwdw.html
Last updated on Monday, June 2nd, 2008.

Safe Drinking Water Act Analytical Methods and Laboratory Certification

Analytical Methods Developed by the Office of Ground Water and Drinking Water

The Office of Ground Water and Drinking Water's Technical Support Center (TSC) is one of the EPA offices responsible for developing analytical methods for drinking water. TSC developed, or participated in the development of, many methods for determining the concentrations of chemical and microbial contaminants in drinking water.

You will need Adobe Reader to view some of the files on this page. See EPA's PDF page to learn more.

Many of the chemical methods developed by TSC are approved for analyses of compliance or unregulated contaminant monitoring samples under the Safe Drinking Water Act. Laboratories can verify that a method is approved by checking the Code of Federal Regulations (40 CFR 141). Listings of approved methods for each regulation are also available on the Analytical Methods Web page. Questions or comments about these methods should be addressed to the Safe Drinking Water Hotline at 1-800-426-4791, or online.

- On this page
  - Individual Chemical Methods Available for Download
  - Additional Chemical Methods
  - Individual Microbial Methods Available for Download
  - Lowest Concentration Minimum Reporting Level (LCMRL)
  - Workshops on Microbial Methods Development

Individual Chemical Methods Available for Download

EPA Method Number	Method Title
300.1[1]	Determination of Inorganic Anions in Drinking Water by Ion Chromatography (PDF) (40pp, 408K)
314.0[1]	Determination of Perchlorate in Drinking Water by Ion Chromatography (PDF) (49pp, 270K)
314.1 Rev 1.0	Determination of Perchlorate in Drinking Water Using Inline Column Concentration/Matrix Elimination Ion Chromatography with Suppressed Conductivity Detection (PDF) (38pp, 568K)
314.2	Determination of Perchlorate in Drinking Water Using Two- Dimensional Ion Chromatography with Suppressed Conductivity Detection (PDF) (42 pp, 667K)
317.0 Rev. 2.0	Determination of Inorganic Oxyhalide Disinfection By-products in Drinking Water Using Ion Chromatography with the Addition of a Postcolumn Reagent

	for Trace Bromate Analysis (PDF) (49 pp, 14MB)
326.0	Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis (PDF) (47 pp, 3.3MB)
327.0 Rev. 1.1	Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry (PDF) (30 pp, 191K) (Typographical errors in Revision 1.0 are corrected in Sections 7.2.4.2, 7.2.5, and 7.3.1.)
331.0 Rev. 1.0	Determination of Perchlorate in Drinking Water by Liquid Chromatography Electrospray Ionization Mass Spectrometry (PDF) (34 pp, 197K)
515.3[1]	Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection (PDF) (56 pp, 132K)
515.4	Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization, and Fast Gas Chromatography with Electron Capture Detection (PDF) (48 pp, 4.5MB)
526[1]	Determination of Selected Semivolatile Organic Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography / Mass Spectrometry (GC/MS) (PDF) (49 pp, 169K)
527 Rev. 1.0	Determination of Selected Pesticides and Flame Retardants in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography / Mass Spectrometry (GS/MS) (PDF) (44 pp, 649K)
531.2	Measurement of N-Methylcarbamoyloximes and N-Methylcarbamates in Water by Direct Aqueous Injection HPLC with Postcolumn Derivatization (PDF) (38 pp, 1.2MB)
532[1]	Determination of Phenylurea Compounds in Drinking Water by Solid Phase Extraction and High Performance Liquid Chromatography with UV Detection (PDF) (47 pp, 107K)
536	Determination of Triazine Pesticides and Their Degradates in Drinking Water by Liquid Chromatography Electrospray Ionization Tandem Mass Spectrometry (LC/ESI-MS/MS) (PDF) (32 pp, 299K)
552.3	Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Microextraction, Derivatization, and Gas Chromatography with Electron Capture Detection (PDF) (55 pp, 636K)
556[1]	Determination of Carbonyl Compounds in Drinking Water by Pentafluorobenzylhydroxylamine Derivatization and Capillary Gas Chromatography with Electron Capture Detection (PDF) (38 pp, 140K) (This method was jointly developed with EPA's Office of Research and Development.)
556.1[1]	Determination of Carbonyl Compounds in Drinking Water by Fast Gas Chromatography (PDF) (37 pp, 185K)

[1] This method is published in "Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1" (EPA 815-R-00-014) which is available through EPA's digital publications National Environmental Publications Internet Site (NEPIS) database.

Additional Chemical Methods

Additional Chemical Methods listed below are included in "Methods for the Determination of Organic Chemicals in Drinking Water, Supplement III" (EPA/600/R-95/131) which is available through EPA's digital publications National Environmental Publications Internet Site (NEPIS) database.

Most of the individual methods are also available for download from the National Environmental Methods Index (NEMI).

EPA Method Number	Method Title
504.1	1,2-Dibromoethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP), and 1,2,3-Trichloropropane (123TCP) in Water by Microextraction and Gas Chromatography (Available for download from NEMI)
507	Determination of Nitrogen- and Phosphorus-Containing Pesticides in Water by Gas Chromatography with a Nitrogen-Phosphorus Detector (Available for download from NEMI)
508	Determination of Chlorinated Pesticides in Water by Gas Chromatography with an Electron Capture Detector (Available for download from NEMI)
508.1	Determination of Chlorinated Pesticides, Herbicides, and Organohalides by Liquid-Solid Extraction and Electron Capture Gas Chromatography (Available for download from NEMI)
509	Determination of Ethylene Thiourea (ETU) in Water using Gas Chromatography with a Nitrogen-Phosphorus Detector
515.1	Determination of Chlorinated Acids in Water by Gas Chromatography with an Electron Capture Detector
531.1	Measurement of N-Methylcarbamoyloximes and N-Methylcarbamates in Water by Direct Aqueous Injection HPLC with Post Column Derivatization (Available for download from NEMI)
551.1	Determination of chlorination disinfection Byproducts, Chlorinated Solvents, and Halogenated Pesticides/Herbicides in Drinking Water by Liquid-Liquid Extraction and Gas Chromatography with Electron-Capture Detection (Available for download from NEMI)
552.2	Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection (Available for download from NEMI)

Individual Microbial Methods Available for Download

EPA Method Number	Method Title
1605	Aeromonas in Finished Water by Membrane Filtration using Ampicillin-Dextrin Agar with Vancomycin (ADA-V) (PDF) (36pp, 443K) (This method was jointly developed with EPA's Office of Research and Development.)

Lowest Concentration Minimum Reporting Level (LCMRL)

For the past several years, EPA has been working on a procedure to determine the Lowest Concentration Minimum Reporting Level (LCMRL). The LCMRL is defined as the lowest *spiking* concentration such that the probability of spike recovery in the 50% to 150% range is at least 99%. LCMRLs are laboratory- and method-specific, and were used by EPA to determine Minimum Reporting Levels (MRLs) for use in the second Unregulated Contaminant Monitoring Regulation (UCMR 2). In addition, EPA's Technical Support Center (TSC) personnel are looking into the potential to expand the use of the LCMRL in EPA programs. Laboratories will only be required to demonstrate their ability to quantitate at the MRLs specified in 40 CFR 141.40. Therefore, there is no requirement, nor associated financial burden, for laboratories to determine LCMRLs.

EPA recently revised the equations within the LCMRL calculator that perform the data regression. Rather than using linear or weighted linear regressions, the revised LCMRL calculator uses advanced statistics to minimize the error at each concentration. The revised calculator is currently undergoing peer review and will be posted to this site when that review is completed. A report describing LCMRL and the current LCMRL calculator are available electronically below.

- Statistical Protocol for the Determination of the Single-Laboratory Lowest Concentration Minimum Reporting Level (LCMRL) and Validation of Laboratory Performance at or Below the Minimum Reporting Level (MRL) (PDF) (28pp, 347K)
- Calculator Application (Self-extracting ZIP File) (12M) - A computer application to calculate LCMRLs

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Workshops on Microbial Methods Development

Workshop on the Large Volume Sample Preparation for Waterborne Pathogens, April 4-5, 2006

- Meeting Summary – Coming Soon

Workshop on the Feasibility of Using DNA/RNA Microarrays and Related Technologies for High Through-Put Detection of Waterborne Pathogens, March 22-23, 2005

- Meeting Summary (PDF) (29pp, 156K)
- Bibliography (PDF) (372pp, 2M)

Workshop to Develop a Protocol for Reliable Genetic Methods for the Detection of Viruses, for Use in EPA's Water Programs, January 15-16, 2003

- Meeting Summary (PDF) (16pp, 47K)
- Quality Assurance/Quality Control Guidance for Laboratories Performing Polymerase Chain Reaction (PCR) Analyses on Environmental Samples (PDF) (64pp, 360K)

http://www.epa.gov/nerlcwww/ordmeth.htm
Last updated on Tuesday, October 30th, 2007.

Microbiological and Chemical Exposure Assessment Research

Recently Developed Methods from the Office of Research and Development (ORD)

Drinking Water Methods

The Office of Research and Development, National Exposure Research Laboratory (NERL) has historically been one of the most active EPA laboratories conducting drinking water methods research. Numerous analytical methods have been written and are available through the NTIS EXIT Disclaimer.

Below are some recently developed analytical methods for drinking water. EPA recommends that laboratories interested in using these methods for compliance monitoring check the Federal Register to determine if and when these methods are approved. The methods are presented in Adobe Acrobat ® PDF format.You will need Adobe Acrobat Reader to view PDF files. See EPA's PDF page for more information about getting and using the free Acrobat Reader

Questions or comments about these methods can be addressed to NERL and Faxed to 513-569-7757 or send an E-mail to: DWmethods.help@epa.gov. Additional assistance can be found by contacting the Safe Drinking Water Hotline at 1 (800) 426-4791, or hotline-sdwa@epa.gov.

- EPA Method 200.5 - Determination of Trace Elements in Drinking Water by Axially Viewed Inductively Coupled Plasma - Atomic Emission Spectrometery. (PDF, 36 pp., 468 KB)
- EPA Method 321.8 - Determination of Bromate in Drinking Waters by Ion Chromatography Inductively Coupled Plasma - Mass Spectrometry. (PDF, 25 pp., 171 KB)
- EPA Method 332.0 - Determination of Perchlorate in Drinking Water by Ion Chromatography with Suppressed Conductivity and Electrospray Ionization Mass Spectrometry. (PDF, 48 pp., 4032 KB)
- EPA Method 415.3 Rev 1.1 - Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water. Revision 1.1, issued in February 2005, reflects a minor change in Section 8.2. (PDF, 56 pp., 1826 KB)
- EPA Method 521 - Determination of Nitrosamines in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography with Large Volume Injection and Chemical Ionization Tandem Mass Spectrometry (MS/MS). (PDF, 47 pp., 459 KB)
- EPA Method 528 - Determination of Phenols in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS). (PDF, 46 pp., 118 KB)
- EPA Method 529 - Determination of Explosives and Related Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS). (PDF, 60 pp., 274 KB)

- EPA Method 535 Rev. 1.1 - Measurement of Chloroacetanilide and Other Acetamide Herbicide Degradates in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). Revision 1.1, issued in April 2005, reflects a minor change in Section 7.2 and Section 17, Table 4. (PDF, 61 pp., 633 KB)

- EPA Method 549.2 - Determination of Diquat and Paraquat in Drinking Water by Liquid-Solid Extraction and High Performance Liquid Chromatography with Ultraviolet Detection. (PDF, 21 pp., 461 KB)

- EPA Method 556 (jointly developed with OGWDW) - Determination of Carbonyl Compounds in Drinking Water by Pentafluorobenzylhydroxylamine Derivatization and Capillary Gas Chromatography with Electron Capture Detection. (PDF, 37 pp., 139 KB)

 to the Analytical Methods Main Page at the Office of Ground Water and Drinking Water

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Marine Water Methods

The online version of METHODS FOR THE DETERMINATION OF CHEMICAL SUBSTANCES IN MARINE AND ESTUARINE ENVIRONMENTAL MATRICES, 2nd Edition (EPA publication EPA/600/R-97/072) is presented in Adobe Acrobat ® PDF format. You may retrieve the entire Manual as a single file (1.6MB) or as individual methods. Inquiries concerning the Manual should be directed to DWmethods.help@epa.gov.

- Retrieve Entire Manual - (PDF, 199 pp., 1.6 MB) *Note: There has been an errata sheet prepared for Method 445.0. To retrieve the errata sheet, see below.*

- Retrieve Introduction and Table of Contents and individual Methods *(below)*. (PDF, 8 pp., 21 KB)

- EPA Method 200.10 - Determination of Trace Elements in Marine Waters by On-line Chelation Preconcentration and Inductively Coupled Plasma - Mass Spectrometry. (PDF, 15 pp., 107 KB)

- EPA Method 200.12 - Determination of Trace Elements in Marine Waters by Stabilized Temperature Graphite Furnace Atomic Absorption. (PDF, 21 pp., 220 KB)

- EPA Method 200.13 - Determination of Trace Elements in Marine Water by Off-Line Chelation Preconcentration with Graphite Furnace Atomic Absorption. (PDF, 19 pp., 142 KB)

- EPA Method 349.0 - Determination of Ammonia in Estuarine and Coastal Waters by Gas Segmented Continuous Flow Colorimetric Analysis. (PDF, 16 pp., 80 KB)

- EPA Method 353.4 - Determination of Nitrate and Nitrite in Estuarine and Coastal Waters by Gas Segmented Continuous Flow Colorimetric Analysis. (PDF, 20 pp., 94 KB)

- EPA Method 365.5 - Determination of Orthophosphate in Estuarine and Coastal Waters by Automated Colorimetric Analysis. (PDF, 9 pp., 75 KB)

- EPA Method 366.0 - Determination of Dissolved Silicate in Estuarine and Coastal Waters by Gas Segmented Continuous Flow Colorimetric Analysis. (PDF, 13 pp., 88 KB)

- EPA Method 440.0 - Determination of Carbon and Nitrogen in Sediments and Particulates of Estuarine/Coastal Waters Using Elemental Analysis. (PDF, 10 pp., 58 KB)

- EPA Method 445.0 - In Vitro Determination of Chlorophyll a and Pheophytin a in Marine and Freshwater Phytoplankton by Fluorescence. (PDF, 22 pp., 99 KB) *Please Note: an errata sheet has been prepared for Method 445.0. Click here to retrieve the Method 445.0 Errata Sheet (PDF, 1 pp., 13 KB)*

- EPA Method 446.0 - In Vitro Determination of Chlorophylls a, b, c1+c2 and Pheopigments in Marine and Freshwater Algae by Visible Spectrophotometry. (PDF, 26 pp., 172 KB)

- EPA Method 447.0 - Determination of Chlorophylls a and b and Identification of Other Pigments of Interest in Marine and Freshwater Algae Using High Performance Liquid Chromatography with Visible Wavelength Detection. (PDF, 20 pp., 86 KB)



Microbiology

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Methods

Note: You will need Adobe Acrobat Reader to view some of the files on this page. See EPA's PDF page to learn more about PDF and for more information about getting and using the free Acrobat Reader.

Bacteria

- Method 1605: *Aeromonas* in Finished Water by Membrane Filtration Using Ampicillin-Dextrin Agar with Vancomycin (ADA-V) (October 2001) (PDF, 26 pp., 443 KB) - This method (EPA 821-R-01-034) describes a performance-based membrane filtration technique for the detection and enumeration of *Aeromonas* species. This method uses a selective medium that partially inhibits the growth of non-target bacterial species while allowing *Aeromonas* to grow and be detected by the production of acid from dextrin fermentation (causing a pH change producing yellow colonies). The method will be proposed for use in EPA's data gathering and monitoring programs under the Unregulated Contaminant Monitoring Rule.

- Method 1604: Total Coliforms and *Escherichia coli* in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium) (September 2002) (PDF, 18 pp., 486 KB) - This document (EPA 821-R-02-024) is identical to the February 2000 version of the MI Agar Method (Membrane Filter Method for the Simultaneous Detection of Total Coliforms and *Escherichia coli* in Drinking Water, EPA-600-R-00-13), with one exception, the addition of MI Broth. The MI Agar Method was approved for use in compliance monitoring of drinking water and source water in support of the National Primary and Secondary Drinking Water Regulations (Federal Register, Vol. 64, No. 230, 1 December 1999, p.67450-67467) becoming effective 3 January 2000. On 6 November 2001, MI Broth was approved as a minor modification. This method, now designated as Method 1604, has been approved for use in monitoring ambient water (Federal Register, Vol. 68, No. 139, 21 July 2003, p.43272-43283) becoming effective 4 August 2003. Four color photos of coliform and *E. coli* colonies on MI agar are also included in Method 1604. The procedure is in the format of the Environmental Monitoring Management Council (EMMC). The method may also be viewed as it appeared upon 1993 publication in the journal Applied and Environmental Microbiology (Vol 59, p.3534-3544), (EPA 600-J-99-225) but it does not include photos (2.2MB).

- Method 1603: *Escherichia coli (E.coli)* in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (Modified mTEC) (September 2002) (PDF, 13 pp., 129 KB) - This method (EPA 821-R-02-023) combines information from a 1985 publication (Test methods for *Escherichia coli* and Enterococci in Water by the Membrane Filter Procedure, EPA 600-4-85-076) and a subsequent March 2000 manual (Improved Enumeration Methods for the Recreational Water Quality Indicators: Enterococci and *Escherichia coli*, EPA/821/R-97/004). Method 1603 is a revised membrane filter (MF) procedure, a single-step method that uses one medium, modified mTEC Agar, and does not require the transfer of the membrane filter to another medium or other substrate.

- Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-ß-D-Glucoside Agar (mEI) (September 2002) (PDF, 14 pp., 125 KB) - This method (EPA 821-R-02-022) combines information previously published in the May 1997 version of Method 1600 (Membrane Filter Test Method for Enterococci in Water, EPA-821-R-97-004a) and a subsequent March 2000 manual (Improved Enumeration Methods for the Recreational Water Quality Indicators: Enterococci and *Escherichia coli*, EPA/821/R-97/004). Method 1600 is a revision of EPA's previous enterococci method, used since 1985 in ambient water quality

monitoring. It reduces analysis time to 24 hours and improves analytical quality. The method has been validated in single- and multi-laboratory studies and has undergone peer review.

- Method 1106.1: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus-Esculin Iron Agar (mE-EIA) (September 2002) (PDF, 16 pp., 806 KB) - This method (EPA 821-R-02-021) combines information from a 1985 publication (Test methods for *Escherichia coli* and Enterococci in Water by the Membrane Filter Procedure, EPA 600-4-85-076) and a subsequent March 2000 manual (Improved Enumeration Methods for the Recreational Water Quality Indicators: Enterococci and *Escherichia coli*, EPA/821/R-97/004). Method 1106.1 is a membrane filter (MF) procedure for the detection and enumeration of enterococci in water. The method incorporates the sequential use of a selective medium, mE agar, and a differential medium, EIA agar.

- Method 1103.1: *Escherichia coli (E. coli)* in Water by Membrane Filtration Using membrane-Thermotolerant *Escherichia coli* Agar (mTEC) (September 2002) (PDF, 17 pp., 471 KB) - This method (EPA 821-R-02-020) combines information from a 1985 publication (Test methods for *Escherichia coli* and Enterococci in Water by the Membrane Filter Procedure, EPA 600-4-85-076) and a subsequent March 2000 manual (Improved Enumeration Methods for the Recreational Water Quality Indicators: Enterococci and *Escherichia coli*, EPA/821/R-97/004). Method 1106.1 is a membrane filter (MF) procedure for the detection and enumeration of *E. coli* in water. The method incorporates the use of a selective and differential medium, mTEC agar followed by incubation with urea substrate medium.

- Improved Enumeration Methods for the Recreational Water Quality Indicators: Enterococci and *Escherichia coli* (March 2000) (PDF, 49 pp., 350 KB) - This manual (EPA 821-R-97-004) describes four test methods for measuring bacteriological densities in ambient waters: the original and a revised method for detecting enterococci, and the original and a revised method for detecting *E. coli*. All four methods use a membrane filter procedure. The manual complements a training video on this topic but may be used independently. *(To obtain the video, see pg 49 of the manual.)*

Protozoans

- Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/FA - December 2005 Update (PDF, 76 pp., 1.2 MB) - This method (EPA 815-R-05-002) is a performance-based method applicable to the determination of *Cryptosporidium* and *Giardia* in aqueous matrices. Method 1623 requires filtration, immunomagnetic separation (IMS) of the oocysts and cysts from the material captured, and immunofluorescent assay (FA) for determination of the oocyst and cyst concentrations. A Training module is also available.

- Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA - December 2005 Update (PDF, 75 pp., 1.3 MB) - This method (EPA 815-R-05-001) is a performance-based method applicable to the determination of *Cryptosporidium* in aqueous matrices. Method 1622 requires filtration, immunomagnetic separation (IMS) of the oocysts from the material captured, and immunofluorescent assay (FA) for determination of the oocyst concentration. There are also forms associated with Method 1622. A Training module is also available.

- Method 1622 and 1623 Forms - These forms are in PDF format and include text-only PDF versions for vision-assisted software: Bench Sheet (PDF, 1 pp., 9 KB) - text (PDF, 1 pp., 39 KB), *Cryptosporidium* report form (PDF, 1 pp., 55 KB) - text (PDF, 1 pp., 34 KB), *Giardia* report form (PDF, 1 pp., 15 KB) - text (PDF, 1 pp., 34 KB), Hemacytometer Data Sheet (PDF, 1 pp., 5 KB) - text (PDF, 1 pp., 30 KB), and Spike Enumeration Form (PDF, 1 pp., 57 KB) - text (PDF, 1 pp., 32 KB).

- Criteria for Evaluation of Proposed Protozoan Detection Methods (PDF, 14 pp., 79 KB) - This document (EPA 815-K-99-02) provides a framework for evaluating methods for detecting *Giardia*, *Cryptosporidium*, and other protozoa.

Viruses and Coliphage

- USEPA Manual of Methods for Virology - Twelve chapters. The individual chapters were prepared as ASCII text files to be viewed/printed with a monospaced font. It is planned to make them also available in PDF format in the future. The manual (EPA 600-4-84-013) describes in detail procedures for detecting viruses in environmental samples.

- Method 1601: Male-specific (F+) and Somatic Coliphage in Water by Two-step Enrichment Procedure (April 2001) (PDF, 40 pp., 463 KB) - This document (EPA 821-R-01-030) describes an enrichment procedure for detecting male-specific and somatic coliphage in groundwater and other waters.

- Method 1602: Male-specific (F+) and Somatic Coliphage in Water by Single Agar Layer (SAL) Procedure (April 2001) (PDF, 38 pp., 376 KB)- This document (EPA 821-R-01-029) describes an single agar layer procedure for detecting and quantitating male-specific and somatic coliphage in groundwater and other waters.

Recreational Water Publications

- The EMPACT Beaches Project: Results From a Study on Microbiological Monitoring in Recreational Waters (PDF, 73 pp., 2.0 MB) - This report (EPA 600-R-04-023) describes the EMPACT (Environmental Monitoring for Public Access and Community Tracking) Beaches Project. The project was conducted to determine which physical, environmental and biological factors significantly influence the monitoring results of recreational waters. Project results will help beach managers and public health officials develop meaningful protocols for maintaining beach water safety.

- Data Quality Objectives and Statistical Design Support for Development of a Monitoring Protocol for Recreational Waters (PDF, 31 pp., 100 KB) - This final report resulted from an expert workshop held in Cincinnati, Ohio to design a research plan that would be used to develop sampling guidance for monitoring water quality indicators in recreational waters.

- Health-Based Monitoring of Recreational Waters: The Feasibility of a New Approach (The 'Annapolis Protocol') - 1999 (PDF, 50 pp., 1.3 MB) - This document presents the outcome of a meeting of experts assembled by the EPA and WHO in November 1998 in Annapolis, MD. The proceedings of the meeting describe a new approach to maintaining the quality of recreational water that better reflects health risk and provides enhanced scope for effective management intervention.

- Health Effects Criteria for Marine Recreational Waters - This 1983 report (EPA 600-1-80-031) presents health effects water quality criteria for marine recreational waters. It can be used to develop guidelines based upon acceptable rather than detectable risk and is consistent with risk analysis. The document has been split into sections for easier downloading. Part 1 (PDF, 50 pp., 1.2 MB), Part 2 (PDF, 18 pp., 1.2 MB), Appendix Part 1 (PDF, 6 pp., 782 KB), App Part 2 (PDF, 10 pp., 1.1 MB), App Part 3 (PDF, 10 pp., 1.1 MB), App Part 4 (PDF, 10 pp., 1.1 MB), App Part 5 (PDF, 8 pp., 789 KB).

- Health Effects Criteria for Fresh Recreational Waters (PDF, 33 pp., 1.3 MB) - This 1984 report (EPA 600-1-84-004) provides an assessment of the relationship between microbiological indicators of water quality and swimming-associated illness. The report resulted from a series of EPA-supported epidemiological-microbiological research projects designed to develop risk-based recreational water criteria for fresh waters.

ICR-related materials

Note: Sample collection for the Information Collection Rule ended in December, 1998. The following ICR publications are maintained online as informational resources.

- ICR - Microbial Laboratory Manual (PDF, 233 pp., 1.2 MB) - This manual (EPA 600-R-95-178) is the "ICR Microbial Laboratory Manual" referenced in the Federal Register. It describes in detail the microbiolgical techniques used with the ICR.

- Information Collection Requirements Rule - Protozoan Method for Detecting *Giardia* Cysts and *Cryptosporidium* Oocysts in Water by a Fluorescent Antibody Procedure (PDF, 59 pp., 2.8 MB) - This publication (EPA 814-B-95-003) is an illustrated guide for lab personnel analyzing water samples for *Giardia* and *Cryptosporidium* under the ICR. The guide complements a training video on this topic.

- Information Collection Requirements Rule - Protozoa and Enteric Virus Sample Collection Procedures (PDF, 63 pp., 2 MB) - This publication (EPA 814-B-95-001) is an illustrated guide for the collection of water samples under the ICR. The guide complements a training video on this topic. *Note: this June 1995 publication contains some material that has been changed with the May 1996 promulgation of the ICR.*

- ICR - MPNV Software Program (168 KB) - This program was used to perform the virus analyses for the ICR - calculating MPN (Most Probable Number) and confidence limits values (see the Virus Quantitation section, page VIII-27 of the ICR Microbial Laboratory Manual). This program is a DOS program. Save the file to a directory of your choice and (in DOS) type "MPNV" followed by " Enter." The file can also be run as a DOS application under Microsoft Windows® . See Example 1(page VIII-48 to VIII-55) and Example II (page VIII-57 to VIII-62) for examples of how to use the program.

Other Publications

- Quality Assurance/Quality Control Guidance for Laboratories Performing PCR Analyses on Environmental Samples (PDF, 64 pp., 360 KB) - This publication (EPA 815-B-04-001) is intended to serve as a general guide for the development of laboratory and method-specific QA/QC procedures for PCR analysis of environmental analysis.

- Preventing Waterborne Disease: A Focus on EPA's Research (PDF, 20 pp., 695 KB) - This publication (EPA 640-K-93-001) is heavily illustrated and describes microbiology-oriented research within the Office of Research and Development.

METHOD 9045D

SOIL AND WASTE pH

1.0 SCOPE AND APPLICATION

1.1 This method is an electrometric procedure for measuring pH in soils and waste samples. Wastes may be solids, sludges, or non-aqueous liquids. If water is present, it must constitute less than 20% of the total volume of the sample.

2.0 SUMMARY OF METHOD

2.1 The sample is mixed with reagent water, and the pH of the resulting aqueous solution is measured.

3.0 INTERFERENCES

3.1 Samples with very low or very high pH may give incorrect readings on the meter. For samples with a true pH of >10, the measured pH may be incorrectly low. This error can be minimized by using a low-sodium-error electrode. Strong acid solutions, with a true pH of <1, may give incorrectly high pH measurements.

3.2 Temperature fluctuations will cause measurement errors.

3.3 Errors will occur when the electrodes become coated. If an electrode becomes coated with an oily material that will not rinse free, the electrode can (1) be cleaned with an ultrasonic bath, or (2) be washed with detergent, rinsed several times with water, placed in 1:10 HCl so that the lower third of the electrode is submerged, and then thoroughly rinsed with water, or (3) be cleaned per the manufacturer's instructions.

4.0 APPARATUS AND MATERIALS

4.1 pH meter with means for temperature compensation.

4.2 Glass electrode.

4.3 Reference electrode -- A silver-silver chloride or other reference electrode of constant potential may be used.

NOTE: Combination electrodes incorporating both measuring and referenced functions are convenient to use and are available with solid, gel-type filling materials that require minimal maintenance.

4.4 Beaker -- 50-mL.

4.5 Thermometer and/or temperature sensor for automatic compensation.

4.6 Analytical balance -- capable of weighing 0.1 g.

5.0 REAGENTS

5.1 Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

5.2 Reagent water. All references to water in this method refer to reagent water, as defined in Chapter One.

5.3 Primary standard buffer salts are available from the National Institute of Standards and Technology (NIST) and should be used in situations where extreme accuracy is necessary. Preparation of reference solutions from these salts requires some special precautions and handling, such as low-conductivity dilution water, drying ovens, and carbon-dioxide-free purge gas. These solutions should be replaced at least once each month.

5.4 Secondary standard buffers may be prepared from NIST salts or purchased as solutions from commercial vendors. These commercially available solutions, which have been validated by comparison with NIST standards, are recommended for routine use.

6.0 SAMPLE PRESERVATION AND HANDLING

Samples should be analyzed as soon as possible.

7.0 PROCEDURE

7.1 Calibration

7.1.1 Because of the wide variety of pH meters and accessories, detailed operating procedures cannot be incorporated into this method. Each analyst must be acquainted with the operation of each system and familiar with all instrument functions. Special attention to care of the electrodes is recommended.

7.1.2 Each instrument/electrode system must be calibrated at a minimum of two points that bracket the expected pH of the samples and are approximately three pH units or more apart. Repeat adjustments on successive portions of the two buffer solutions until readings are within 0.05 pH units of the buffer solution value. If an accurate pH reading based on the conventional pH scale [0 to 14 at 25 •C] is required, the analyst should control sample temperature at 25 ± 1 •C when sample pH approaches the alkaline end of the scale (e.g., a pH of 11 or above).

7.2 Sample preparation and pH measurement of soils:

7.2.1 To 20 g of soil in a 50-mL beaker, add 20 mL of reagent water, cover, and continuously stir the suspension for 5 min. Additional dilutions are allowed if working with hygroscopic soils and salts or other problematic matrices.

7.2.2 Let the soil suspension stand for about 1 hr to allow most of the suspended clay to settle out from the suspension or filter or centrifuge off the aqueous phase for pH measurement.

7.2.3 Adjust the electrodes in the clamps of the electrode holder so that, upon lowering the electrodes into the beaker, the glass electrode will be immersed just deep enough into the clear supernatant solution to establish a good electrical contact through the ground-glass joint or the fiber-capillary hole. Insert the electrodes into the sample solution in this manner. For combination electrodes, immerse just below the suspension.

7.2.4 If the sample temperature differs by more than 2 •C from the buffer solution, the measured pH values must be corrected.

7.2.5 Report the results as "soil pH measured in water at _•C" where "_•C" is the temperature at which the test was conducted.

7.3 Sample preparation and pH measurement of waste materials

7.3.1 To 20 g of waste sample in a 50-mL beaker, add 20 mL of reagent water, cover, and continuously stir the suspension for 5 min. Additional dilutions are allowed if working with hygroscopic wastes and salts or other problematic matrices.

7.3.2 Let the waste suspension stand for about 15 min to allow most of the suspended waste to settle out from the suspension or filter or centrifuge off aqueous phase for pH measurement.

NOTE: If the waste is hygroscopic and absorbs all the reagent water, begin the experiment again using 20 g of waste and 40 mL of reagent water.

NOTE: If the supernatant is multiphasic, decant the oily phase and measure the pH of the aqueous phase. The electrode may need to be cleaned (Step 3.3) if it becomes coated with an oily material.

7.3.3 Adjust the electrodes in the clamps of the electrode holder so that, upon lowering the electrodes into the beaker, the glass electrode will be immersed just deep enough into the clear supernatant to establish good electrical contact through the ground-glass joint or the fiber-capillary hole. Insert the electrode into the sample solution in this manner. For combination electrodes, immerse just below the suspension.

7.3.4 If the sample temperature differs by more than 2 •C from the buffer solution, the measured pH values must be corrected.

7.3.5 Report the results as "waste pH measured in water at _•C" where "_•C" is the temperature at which the test was conducted.

8.0 QUALITY CONTROL

8.1 Refer to Chapter One for the appropriate QC protocols.

8.2 Electrodes must be thoroughly rinsed between samples.

9.0 METHOD PERFORMANCE

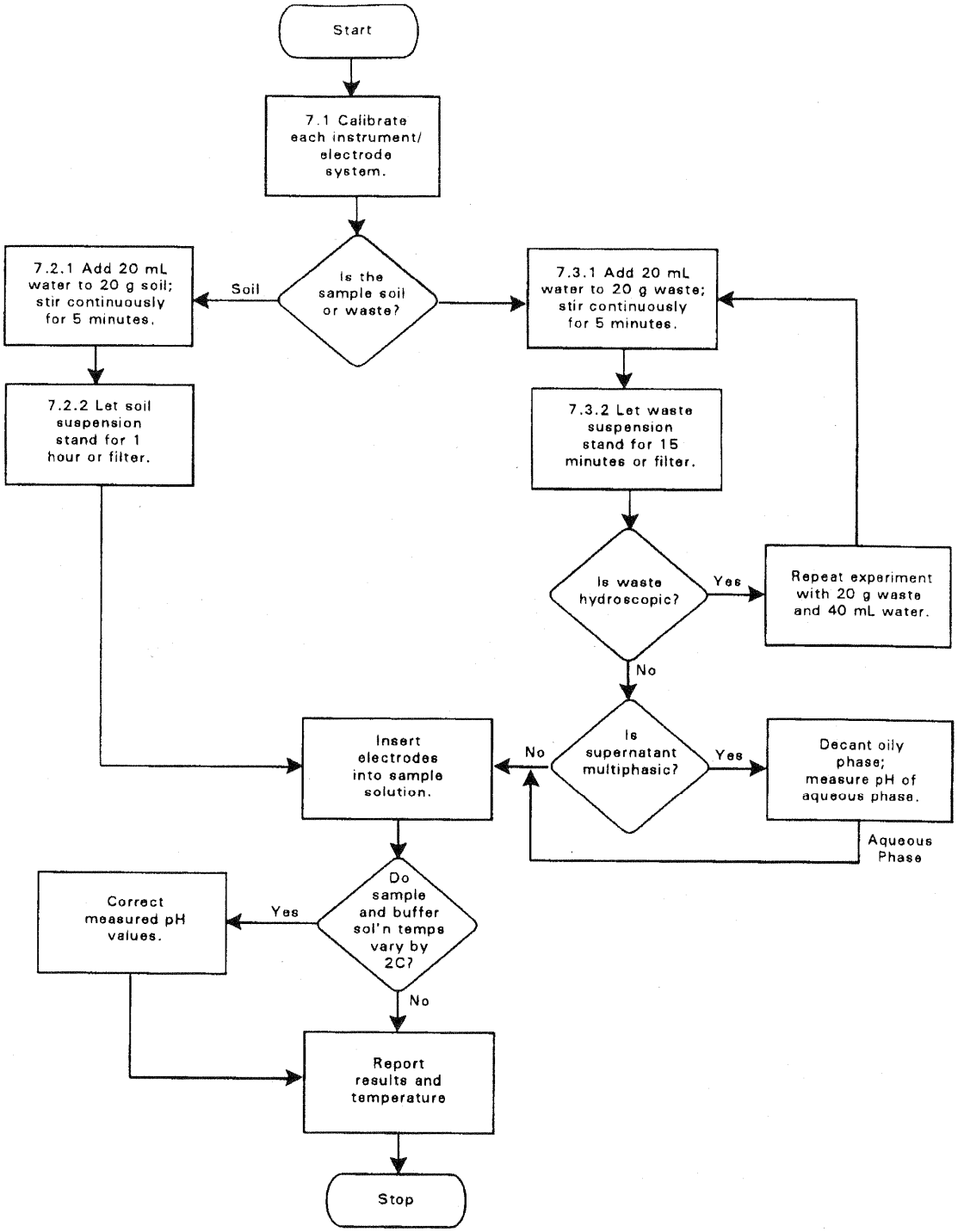
9.1 No data provided.

10.0 REFERENCES

1. Black, Charles Allen; Methods of Soil Analysis; American Society of Agronomy: Madison, WI, 1973.

2. National Bureau of Standards, Standard Reference Material Catalog, 1986-87, Special Publication 260.

SOIL AND WASTE pH



n-HEXANE EXTRACTABLE MATERIAL (HEM) FOR SLUDGE, SEDIMENT, AND SOLID SAMPLES

1.0 SCOPE AND APPLICATION

1.1 Method 9071 may be used to quantify low concentrations of oil and grease in soil, sediments, sludges, and other solid materials amenable to chemical drying and solvent extraction with n-hexane. "Oil and grease" is a conventional pollutant under 40 CFR 401.16 and generally refers to substances, including biological lipids and mineral hydrocarbons, that have similar physical characteristics and common solubility in an organic extracting solvent. As such, oil and grease is an operationally defined parameter, and the results will depend entirely on the extracting solvent and method of extraction. Method 9071 employs n-hexane as the extraction solvent with Soxhlet extraction and the results of this method are appropriately termed "n-hexane extractable material (HEM)." Section 1.2 lists the type of materials that may be extracted by this method. In the context of this method, "HEM" is used throughout this method and for operational purposes, may be considered synonymous with "oil and grease" within the limitations discussed below.

1.2 Specifically, Method 9071 is suitable for extracting relatively non-volatile hydrocarbons, vegetable oils, animal fats, waxes, soaps, greases, biological lipids, and related materials.

1.3 Method 9071 is <u>not</u> recommended for measuring materials that volatilize at temperatures below 85°C. Petroleum fuels from gasoline through #2 fuel oil may be partially lost during the solvent removal process.

1.4 Some crude oils and heavy fuel oils may contain materials that are not soluble in n-hexane, and recovery of these materials may be low.

2.0 SUMMARY OF METHOD

2.1 A representative portion of wet (as received) waste is acidified with concentrated HCl and chemically dried with magnesium sulfate or sodium sulfate. Magnesium sulfate monohydrate is used to dry acidified sludges as it will combine with 75% of its own weight in water in forming $MgSO_4 \cdot 7H_2O$. Anhydrous sodium sulfate is used to dry soil and sediment samples.

2.2 After drying, the HEM is extracted with n-hexane using a Soxhlet apparatus. The n-hexane extract is then distilled from the extract and the HEM is desiccated and weighed.

2.3 When necessary, a separate sample portion is evaluated for percent solids, and the dry weight fraction may be used to calculate the dry-weight HEM concentration of the soil, sediment, or waste.

3.0 DEFINITIONS

3.1 n-Hexane extractable material (HEM, oil and grease): Material that is extracted from a sample using n-hexane and determined by this method. This material includes relatively non-volatile hydrocarbons, vegetable oils, animal fats, waxes, soaps, greases, and related matter.

3.2 Refer to Chapter One for additional definitions.

4.0 INTERFERENCES

4.1 This method is entirely empirical, and duplicate results having a high degree of precision can be obtained only by strict adherence to all details. The rate of cycling and time of extraction in the Soxhlet apparatus must be consistent and length of time required for drying and cooling extracted materials must be the same in order to generate consistent results. It is important that the procedures be performed as directed due to the varying solubilities of the different greases and heavy mineral oils.

4.2 Solvents, reagents, glassware, and other sample-processing hardware may yield artifacts that could affect the results. All solvents and reagents used in the analysis should be demonstrated to be free from interferences by processing a method blank with each analytical batch. Specific selection of reagents, solvent washes, or purification of solvents may be required. Use of plastic measuring devices, and/or plastic tubing attachments must be avoided.

4.3 Glassware should be cleaned by washing with hot tap water with detergent, rinsing with tap water and reagent water, and rinsing with solvent. Glassware may also be baked at 200-250°C for 1 hour. Boiling flasks that are used to contain the extracted residues may be dried in an oven at 105-115°C and stored in a desiccator until used. Depending on the project DQOs, strict adherence to the washing and handling procedures cited above may not be necessary as long as the laboratory can demonstrate that alternative cleaning procedures yield acceptable method performance and meet method blank acceptance criteria.

4.4 A gradual increase in weight may result due to the absorption of oxygen; a gradual loss of weight may result due to volatilization. Extracted residues should be maintained in a desiccator during cooling and prior to weighing. Extracted residues should be weighed as soon as possible after cooling.

4.5 The presence of non-oily extractable substance such as sulfur compounds, organic dyes, and chlorophyll, may result in a positive bias. For the purpose of this method, all materials extracted and retained during this procedure are defined as HEM.

5.0 SAFETY

5.1 The toxicity or carcinogenicity of each reagent used in this method has not been precisely determined; however, each chemical should be treated as a potential health hazard. Exposure to these chemicals should be reduced to the lowest possible level. It is suggested that the laboratory perform personal hygiene monitoring of each analyst that uses this method. This monitoring should be performed using Occupational Safety and Health Administration (OSHA) or National Institute of Occupational Safety and Health (NIOSH) approved personal hygiene monitoring methods. Results of this monitoring should be made available to the analyst.

5.2 n-Hexane has been shown to have increased neurotoxic effects over other hexanes and some other solvents. OSHA has proposed a time-weighted average (TWA) of 50 parts-per-million (ppm); NIOSH concurs that an 8-hour TWA/permissible exposure limit (PEL) of 50 ppm is appropriate for n-hexane; and the American Conference of Governmental Industrial Hygienists (ACGIH) has published a threshold limit value (TLV) of 50 ppm for n-hexane. Inhalation of n-hexane should be minimized by performing all operations with n-hexane in a explosion-proof hood or well-ventilated area.

5.3 n-Hexane has a flash point of -23°C (-9°F), has explosive limits in air in the range of 1 to 7 percent, and poses a serious fire risk when heated or exposed to flame. n-Hexane can react vigorously with oxidizing materials. The laboratory should include procedures in its operations that address the safe handling of n-hexane.

5.4 Unknown samples may contain high concentrations of volatile toxic compounds. Sample containers should be opened in a hood and handled with gloves to prevent exposure.

5.5 This method does not address all safety issues associated with its use. The laboratory is responsible for maintaining a safe work environment and a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of material safety data sheets (MSDSs) should be available to all personnel involved in these analyses.

6.0 EQUIPMENT AND SUPPLIES

6.1 Soxhlet extraction apparatus.

6.2 Heating mantle - explosion-proof, with temperature control.

6.3 Boiling flask - 125-mL or appropriate size.

6.4 Analytical balance - capable of weighing 0.1 mg.

6.5 Vacuum pump, or other vacuum source.

6.6 Paper extraction thimble for Soxhlet apparatus.

6.7 Glass wool or small glass beads to fill thimble.

6.8 Grease-free, non-absorbent cotton - To remove possible interferences, each batch of cotton should be washed with n-hexane. Solvent washing may not be necessary if the laboratory can demonstrate that the unwashed cotton does not affect the performance of the method or that the concentration of HEM in the sample is so high that low contaminant concentration is insignificant.

6.9 Beakers - 100- 150-mL.

6.10 pH paper.

6.11 Porcelain mortar and pestle.

6.12 Extraction flask - 150-mL or appropriate size.

6.13 Waterbath or steam bath-explosion-proof - capable of maintaining a temperature of at least 85°C.

6.14 Distilling apparatus - For removing n-hexane from extract.

6.14.1 Distilling head-Claisen (VWR Scientific No 26339-005, or equivalent), includes Claisen-type connecting tube and condenser.

6.14.2 Distillation adapter (used to attach distilling head and to the waste collection flask for recovery of solvent).

6.14.3 Distillate collection flask (attached to the distilling adaptor for collection of the distilled solvent).

6.14.4 Ice bath or recirculating chiller (to aid in the condensation and collection of the distilled solvent).

6.15 Desiccator - Cabinet or jar type, capable of holding boiling flasks during cooling and storage.

6.16 Tongs - for handling the boiling flasks.

6.17 Glass fiber filter paper - Whatman No. 40 or equivalent.

6.18 Boiling chips - Silicon carbide or fluoropolymer.

7.0 REAGENTS

7.1 Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

7.2 Reagent water. All references to water in this method refer to reagent water, as defined in Chapter One.

7.3 Concentrated hydrochloric acid (HCl).

7.4 Magnesium sulfate monohydrate. Prepare $MgSO_4 \cdot H_2O$ by spreading a thin layer in a dish and drying in an oven at 150°C overnight. Store in a tightly sealed glass container until used.

7.5 Sodium sulfate, granular, anhydrous (Na_2SO_4). Purify by heating at 400°C for 4 hours in a shallow tray, or by precleaning the sodium sulfate with methylene chloride. If the sodium sulfate is precleaned with methylene chloride, a method blank must be analyzed, demonstrating that there is no interference from the sodium sulfate. Store in a tightly sealed glass container until used.

7.6 n-Hexane. Purity of 85%, 99.0% minimum saturated C_6 isomers, residue less than 1 mg/L. Boiling point, 69°C.

7.7 Hexadecane($CH_3(CH_2)_{14}CH_3$)/stearic acid ($CH_3(CH_2)_{16}COOH$). 1:1 spiking solution. Prepare in acetone at a concentration of 2 mg/mL each.

Weigh 200 ± 2 mg of stearic acid and 200 ± 2 mg hexadecane into a 100 mL volumetric flask and fill to the mark with acetone. The total concentration of this stock is 4000 mg/L (ppm) HEM. This standard may be used for spiking samples and preparing laboratory control samples. Store in a glass container with a fluoropolymer-lined cap at room temperature. Shield from light.

Note: The spiking solution may require warming for complete dissolution of stearic acid.

8.0 SAMPLE COLLECTION, PRESERVATION, AND STORAGE

8.1 A minimum of 100 grams of sample should be collected using a metal spatula, spoon, or equivalent device. Samples should be collected into a pre-cleaned wide-mouth glass container fitted with a TFE-lined screw cap.

8.2 When practical (i.e., when the sample matrix allows the complete mixing of sample and acid such as with a pourable sludge or sediment), the sample should be preserved to a pH < 2 by adding 1 mL of concentrated HCl per 100 gram of sample and cooled to 4 ± 2 °C. If acidification is not practical (as with a dry soil), the addition of the HCl is not required and the sample should be cooled to 4 ± 2 °C. The laboratory must be notified so that the sample can be acidified prior to analysis.

8.3 A holding time has not been established for HEM in solids, but it is recommended that the sample be analyzed as soon as possible.

9.0 QUALITY CONTROL

9.1 Each laboratory that uses this method is required to operate a formal quality control program. The minimum requirements of this program consist of an initial demonstration of laboratory capability and the analysis of spiked samples as a continuing check on performance. The laboratory is required to maintain performance records to define the quality of data that is generated.

9.2 Employ a minimum of one method blank per analytical batch or twenty samples, whichever is more frequent, to verify that all reagents, solvents, and equipment are contamination free. Prepare the method blank from 5 g of inert matrix such as pre-cleaned sand or similar material, and carry it through the analytical process.

9.3 Run one matrix duplicate and matrix spike sample every twenty samples or analytical batch, whichever is more frequent. Matrix duplicates and spikes are brought through the whole sample preparation and analytical process.

9.4 The performance of the method should be evaluated by the use of a Laboratory Control Sample (LCS). The LCS is prepared by spiking an inert matrix (as pre-cleaned sand or similar material) with an appropriate volume of spiking solution (Sec. 7.7) and carrying it through the analytical process.

10.0 CALIBRATION AND STANDARDIZATION

10.1 Calibrate the analytical balance at 2 mg and 1000 mg using class "S" weights.

10.2 Calibration shall be within ± 10% (i.e., ± 0.2 mg) at 2 mg and ± 0.5 % (i.e., ± 5 mg) at 1000 mg. If values are not within these limits, recalibrate the balance.

11.0 PROCEDURE

11.1 Determination of Sample Dry Weight Fraction

11.1.1 When it is necessary to report the HEM on a dry weight basis, determine the dry weight fraction using a separate aliquot of sample, as discussed below. The aliquot used for this determination cannot be used to evaluate HEM.

11.1.2 Weigh 5-10 gram (± 0.01 gram) of the sample into pre-weighed crucible. Determine the weight of the wet sample by subtracting the weight of the crucible.

11.1.3 Place the crucible with the wet sample in an oven overnight at 105°C. Remove crucible from oven and place in a desiccator to cool. Weigh. Determine dry weight of sample by subtracting the weight of the crucible. Determine the dry weight fraction of the sample as follows:

NOTE: The drying oven should be contained in a hood or vented. Significant laboratory contamination may result from a heavily contaminated hazardous waste sample.

$$\text{dry weight fraction} = \frac{\text{g of dry sample}}{\text{g of sample}}$$

11.2 Sample Preparation

11.2.1 Sludge/Waste Samples

11.2.1.1 Weigh out 20 ± 0.5 grams of wet sample into a 150-mL beaker.

11.2.1.2 If the sample has not been acidified, acidify to a pH ≤ 2 with approximately 0.3 mL concentrated HCl.

11.2.1.3 Add 25 grams $Mg_2SO_4 \cdot H_2O$ (Sec. 7.4) and stir to a smooth paste.

11.2.1.4 Spread paste on sides of beaker to facilitate evaporation. Let stand about 15-30 min or until material is solidified.

11.2.1.5 Remove solids and grind to fine powder in a mortar.

11.2.1.6 Add the powder to the paper extraction thimble.

11.2.1.7 Wipe beaker and mortar with pieces of filter paper moistened with n-hexane and add to thimble.

11.2.1.8 Fill thimble with glass wool (or glass beads).

11.2.2 Sediment/Soil Samples

11.2.2.1 Decant and discard any water layer on a sediment sample. Mix sample thoroughly, especially composited samples. Discard any foreign objects such as sticks, leaves, and rocks.

11.2.2.2 Blend 10 grams of the sample with 10 grams of anhydrous sodium sulfate (Sec. 7.5) as described in Section 11.2.1. Transfer homogenized paste to an extraction thimble and cover with glass wool or glass beads. The extraction thimble must drain freely for the duration of the extraction period.

11.3 Extraction

11.3.1 Set-up the Soxhlet apparatus containing the extraction thimble and sample and attach a 125-mL boiling flask containing 90 mL of n-hexane. Add boiling chips. Adjust the heating control on the heating mantle so that a cycling rate of 20 cycles/h is obtained. Extract for a period of 4 hrs.

11.3.2 Tare a clean 250-mL or appropriate sized boiling flask as follows:

11.3.2.1 Dry the flask in an oven at 105-115°C for a minimum of 2 h.

11.3.2.2 Remove from the oven and immediately transfer to a desiccator to cool at room temperature.

11.3.2.3 When cool, remove from the desiccator with tongs and weigh immediately on a calibrated balance.

11.3.3 At the end of the 4 h extraction period, filter the extract through grease-free cotton, into the pre-weighed boiling flask (Sec. 11.3.2). Use gloves to avoid adding fingerprints to the flask.

11.3.4 Rinse flask and cotton with n-hexane and add to the 250-mL boiling flask.

NOTE: If the extract is clear and no suspended particles are present, the filtration step may be omitted.

11.3.5 Connect the boiling flask to the distilling head apparatus and distill the solvent by immersing the lower half of the flask in a water bath or a steam bath. A heating mantle may also be used. Adjust the temperature of the heating device to complete the distillation in less than 30 minutes. Collect the solvent for reuse or appropriate disposal.

11.3.6 When the distillation is complete, remove the distilling head. Immediately remove the flask from the heat source and wipe the outside to remove excess moisture and fingerprints. To remove solvent vapor, sweep out the flask for 15 sec with air by inserting a glass tube that is connected to a vacuum source.

11.3.7 Cool the boiling flask in a desiccator for 30 min and weigh. Determine the gain in weight of the boiling flask by subtracting the weight of the boiling flask (Sec. 11.3.2) from the final boiling flask weight.

12.0 DATA ANALYSIS AND CALCULATIONS

Calculate the concentration of HEM in the sample as follows:

$$\text{HEM (mg/kg wet weight)} = \frac{\text{gain in weight of flask(mg) X 1000}}{\text{weight of wet solid(g)}}$$

NOTE: If it is necessary to report the results on a dry weight basis, divide the result obtained above by the dry weight fraction calculated in Sec. 11.1.3. Report the results as mg/kg HEM dry weight. If it is necessary to report the results as a percentage of the wet or dry weight, divide the wet-weight concentration or dry weight concentration by 10,000 and report the result as % HEM wet or dry weight.

13.0 METHOD PERFORMANCE

In a preliminary study designed to find a suitable replacement for Freon-113, three EPA contract laboratories evaluated a total of 28 solid samples derived from various industrial and commercial processes for oil and grease. This study evaluated a total of six solvents, including n-hexane, to determine which of the alternative solvents produced results most closely with that of Freon-113. In this study, each waste was Soxhlet-extracted in triplicate using Freon-113 and each of the alternative solvents. Based on the overall results, n-hexane was judged to be the best alternative solvent. The data provided in Table 1 compare the results for Freon-113 and n-hexane for each waste. For a complete discussion of this study, refer to reference 1 in Section 16.0.

14.0 POLLUTION PREVENTION

14.1 Pollution prevention encompasses any technique that reduces or eliminates the quantity and/or toxicity of waste at the point of generation. Numerous opportunities for pollution prevention exist in laboratory operation. The EPA has established a preferred hierarchy of environmental management techniques that places pollution prevention as the management option of first choice. Whenever feasible, laboratory personnel should use pollution prevention techniques to address their waste generation. When wastes cannot be feasibly reduced at the source, the Agency recommends recycling as the next best option.

14.2 For information about pollution prevention that may be applicable to laboratories and research institutions consult *Less is Better: Laboratory Chemical management for Waste Reduction* available from the American Chemical Society's Department of Government Relations and Science Policy, 1155 16th St., N.W. Washington, D.C. 20036, (202) 872-4477.

15.0 WASTE MANAGEMENT

The Environmental Protection Agency requires that laboratory waste management practices be conducted consistent with all applicable Federal, state and local rules and regulations. The Agency urges laboratories to protect the air, water, and land by minimizing and controlling all releases from hoods and bench operations, complying with the letter and spirit of any sewer

discharge permits and regulations, and by complying with all solid and hazardous waste regulations, particularly the hazardous waste identification rules and land disposal restrictions. For further information on waste management, consult *The Waste Management Manual for Laboratory Personnel* available from the American Chemical Society at the address listed in Sec. 14.2.

16.0 REFERENCES

1. Preliminary Report of EPA Efforts to Replace Freon for the Determination of Oil and Grease, United States Environmental Protection Agency, Office of Water, EPA-821-93-009. June 1993.

2. Method 1664, Revision A: n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM) by Extraction and Gravimetry.

17.0 TABLES, DIAGRAMS, FLOWCHARTS, AND VALIDATION DATA

The pages to follow contain Table 1, and a flow diagram of the method procedure.

TABLE 1

SOXHLET EXTRACTION OF SOLIDS USING FREON-113 AND N-HEXANE
All concentrations in mg/kg

Facility/ Process	Waste Stream	Solvent: Freon Hexane	Rep No. 1	Rep No. 2	Rep No. 3	Mean Concen-tration	Standard Deviation
Paper Mill	Dewatered Sludge	Freon	11000	5300	7900	8000	2762
		Hexane	6600	2400	11000	6600	4203
POTW	Sewage Sludge	Freon	98000	81000	81000	87000	9940
		Hexane	110000	86000	80000	91000	13281
Leather Tannery	Dewatered Sludge	Freon	11000	12000	12000	12000	732
		Hexane	21000	15000	19000	18000	3201
POTW	Digested Sludge	Freon	130000	97000	66000	98000	33028
		Hexane	54000	76000	48000	59000	14516
Petroleum Refinery	API Separator Sludge	Freon	320000	350000	250000	310000	53257
		Hexane	240000	320000	240000	270000	43822
Industrial Laundry	DAF Sludge	Freon	310000	310000	240000	290000	41717
		Hexane	290000	360000	180000	280000	90819
Fish Oil Plant	Oily Sludge	Freon	890000	1000000	770000	890000	131249
		Hexane	440000	530000	460000	480000	46318
Coke Plant	Waste Activated Sludge	Freon	8300	8000	18000	11000	5505
		Hexane	14000	19000	15000	16000	2732
Wood Preserving Plant	Solid Waste	Freon	150000	140000	140000	140000	3512
		Hexane	140000	130000	130000	130000	6557
Drilling Fluid Supplier	Used drilling mud	Freon	1300	1600	1300	1400	157
		Hexane	1300	1200	1600	1400	201
Contam. Soils	Kerosene Contaminated Soil	Freon	2000	1400	1900	1700	352
		Hexane	2500	3200	2600	2800	410
Poultry Plant	Waste Activated Sludge	Freon	38000	11000	40000	30000	16263
		Hexane	5900	11000	46000	21000	21795
Rolling Mill	Dewatered Scale	Freon	11000	14000	17000	14000	2884
		Hexane	14000	14000	16000	15000	983
Mayonnaise Plant	Oily Sludge	Freon	880000	850000	780000	840000	50521
		Hexane	590000	780000	520000	630000	132020
Seafood Plant	Waste Sludge	Freon	64000		53000	58000	7526
		Hexane	34000	31000	27000	31000	3867

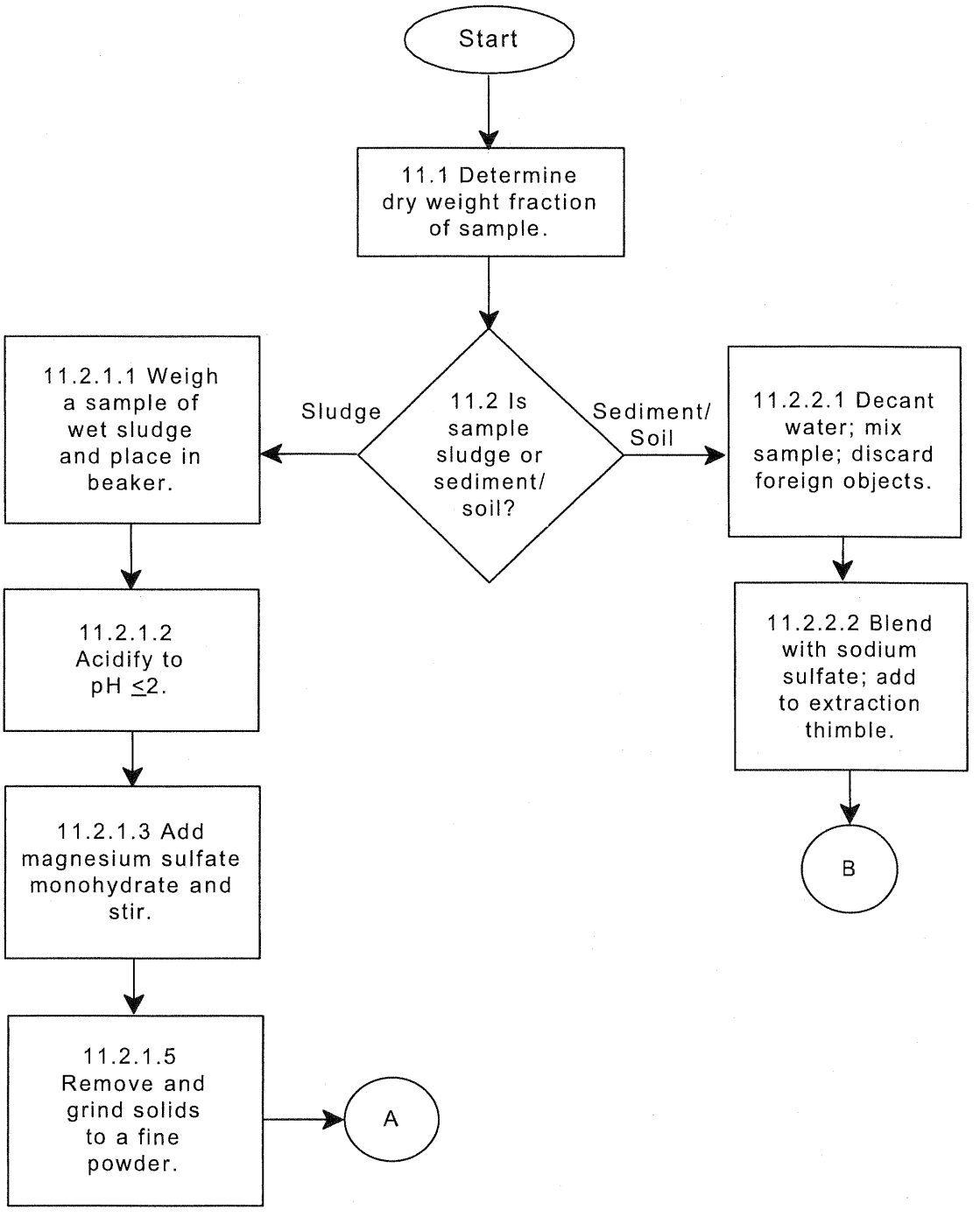
TABLE 1

(CONTINUED)

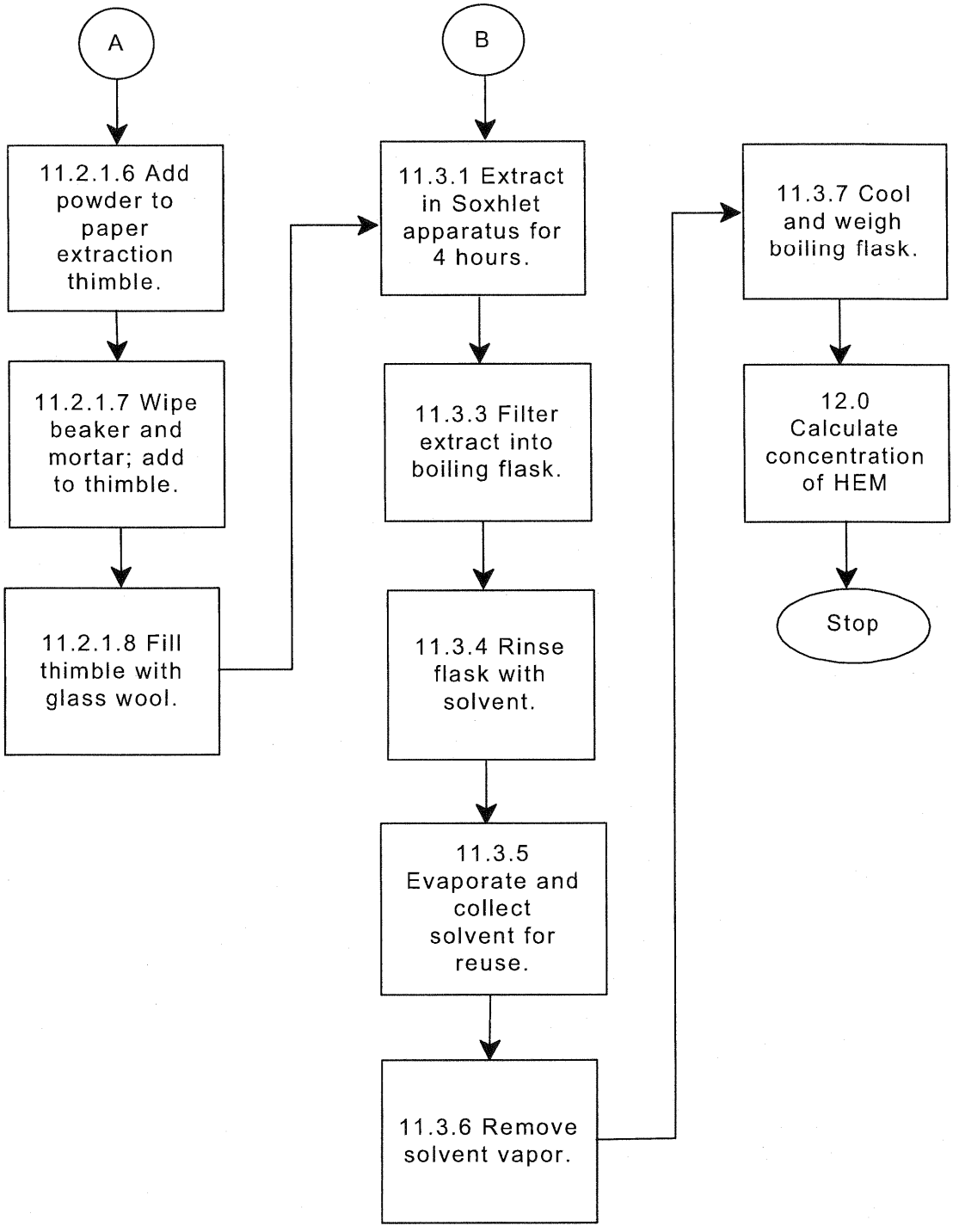
Facility/ Process	Waste Stream	Solvent: Freon Hexane	Rep No. 1	Rep No. 2	Rep No. 3	Mean Concen-tration	Standard Deviation
Seafood Plant	Oily Sludge	Freon	400000	410000	430000	410000	16371
		Hexane	400000	390000	390000	400000	7095
Poultry Plant	DAF Sludge	Freon	670000	600000	570000	610000	49549
		Hexane	530000	530000	530000	530000	2449
Railroad Yard	Oily Sludge	Freon	870000	920000	870000	890000	27906
		Hexane	850000	840000	830000	840000	6884
Can Manufact Plant	Filter Cake	Freon	62000	62000	60000	61000	976
		Hexane	69000	64000	66000	66000	2615
Soup Plant	DAF Sludge	Freon	600000	590000	610000	600000	10066
		Hexane	580000	520000	600000	570000	40361
Oily Water Treatment Plant	Oily Sludge	Freon	76000	75000	70000	74000	3215
		Hexane	77000	60000	79000	72000	10713
Can Manufact Plant	Oily Sludge	Freon	94000	88000	94000	92000	3291
		Hexane	80000	90000	83000	85000	4992
Can Manufact Plant	Filter Cake	Freon	290000	290000	300000	290000	6217
		Hexane	290000	290000	290000	290000	2029
Drum Handling Facility	Oily Sludge	Freon	1200000	1100000	1200000	1200000	57735
		Hexane	990000	1000000	980000	1000000	27319
Polymer Plant	Dewatered Sludge	Freon	13000	12000	8200	11000	2524
		Hexane	8400	6900	9100	8100	1122
Restaurant	Vegetable Oil Waste	Freon	760000	610000	780000	720000	92060
		Hexane	1100000	980000	980000	1000000	80064
Leather Tannery	Waste Sludge	Freon	180000	220000	190000	190000	22140
		Hexane	240000	270000	210000	240000	31177

Source: Reference 1

n-HEXANE EXTRACTABLE MATERIAL (HEM) FOR SLUDGE, SEDIMENT, AND SOLID SAMPLES



n-HEXANE EXTRACTABLE MATERIAL (HEM) FOR SLUDGE, SEDIMENT, AND SOLID SAMPLES
(Continued)



METHOD 9010C

TOTAL AND AMENABLE CYANIDE: DISTILLATION

1.0 SCOPE AND APPLICATION

1.1 This method is a reflux-distillation procedure used to extract soluble cyanide salts and many insoluble cyanide complexes from wastes and leachates. It is based on the decomposition of nearly all cyanides by a reflux distillation procedure using a strong acid and a magnesium catalyst. Cyanide, in the form of hydrocyanic acid (HCN) is purged from the sample and captured into an alkaline scrubber solution. The concentration of cyanide in the scrubber solution is then determined by Method 9014 or Method 9213. This method may be used as a reflux-distillation procedure for both total cyanide and cyanide amenable to chlorination. The "reactive" cyanide content of a waste is not determined by this method. Refer to 40 CFR 261.23 for information on the characteristic of reactivity.

1.2 This method was designed to address the problem of "trace" analyses (<1000 ppm). The method may also be used for "minor" (1000 ppm - 10,000 ppm) and "major" (>10,000 ppm) analyses by adapting the appropriate sample dilution. However, the amount of sodium hydroxide in the standards and the sample analyzed must be the same.

2.0 SUMMARY OF METHOD

2.1 The cyanide, as hydrocyanic acid (HCN), is released from samples containing cyanide by means of a reflux-distillation operation under acidic conditions and absorbed in a scrubber containing sodium hydroxide solution. The cyanide concentration in the absorbing solution is then determined colorimetrically or titrametrically by Method 9014 or by ion-selective electrode by Method 9213.

3.0 INTERFERENCES

3.1 Interferences are eliminated or reduced by using the distillation procedure. Chlorine and sulfide are interferences in Method 9010.

3.2 Oxidizing agents such as chlorine decompose most cyanides. Chlorine interferences can be removed by adding an excess of sodium arsenite to the waste prior to preservation and storage of the sample to reduce the chlorine to chloride which does not interfere.

3.3 Sulfide interference can be removed by adding an excess of bismuth nitrate to the waste (to precipitate the sulfide) before distillation. Samples that contain hydrogen sulfide, metal sulfides, or other compounds that may produce hydrogen sulfide during the distillation should be treated by the addition of bismuth nitrate.

3.4 High results may be obtained for samples that contain nitrate and/or nitrite. During the distillation, nitrate and nitrite will form nitrous acid, which will react with some organic compounds to form oximes. These compounds once formed will decompose under test conditions to generate HCN. The possibility of interference of nitrate and nitrite is eliminated by pretreatment with sulfamic acid just before distillation. Nitrate and nitrite are interferences when present at levels higher than 10 mg/L and in conjunction with certain organic compounds.

3.5 Thiocyanate is reported to be an interference when present at very high levels. Levels of 10 mg/L were not found to interfere.

3.6 Fatty acids, detergents, surfactants, and other compounds may cause foaming during the distillation when they are present in high concentrations and may make the endpoint for the titrimetric determination difficult to detect. Refer to Sec. 6.7 for an extraction procedure to eliminate this interference.

4.0 APPARATUS AND MATERIALS

4.1 Reflux distillation apparatus such as shown in Figure 1 or Figure 2. The boiling flask should be of one liter size with inlet tube and provision for condenser. The gas scrubber may be a 270-mL Fisher-Milligan scrubber (Fisher, Part No. 07-513) or equivalent. The reflux apparatus may be a Wheaton 377160 distillation unit or equivalent.

4.2 Hot plate stirrer/heating mantle.

4.3 pH meter.

4.4 Amber light.

4.5 Vacuum source.

4.6 Refrigerator.

4.7 Erlenmeyer flask - 500 mL.

4.8 KI starch paper.

4.9 Class A volumetric flasks - 1000, 250, and 100 mL.

5.0 REAGENTS

5.1 Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

5.2 Reagent water. All references to water in this method refer to reagent water, as defined in Chapter One.

5.3 Reagents for sample collection, preservation, and handling

5.3.1 Sodium arsenite (0.1N), $NaAsO_2$. Dissolve 3.2 g of $NaAsO_2$ in 250 mL water.

5.3.2 Ascorbic acid, $C_6H_8O_6$.

5.3.3 Sodium hydroxide solution (50%), NaOH. Commercially available.

5.3.4 Acetic acid (1.6M) CH_3COOH. Dilute one part of concentrated acetic acid with 9 parts of water.

5.3.5 2,2,4-Trimethylpentane, C_8H_{18}.

5.3.6 Hexane, C_6H_{14}.

5.3.7 Chloroform, $CHCl_3$.

5.4 Reagents for cyanides amenable to chlorination

5.4.1 Calcium hypochlorite solution (0.35M), $Ca(OCl)_2$. Combine 5 g of calcium hypochlorite and 100 mL of water. Shake before using.

5.4.2 Sodium hydroxide solution (1.25N), NaOH. Dissolve 50 g of NaOH in 1 liter of water.

5.4.3 Sodium arsenite (O.1N). See Sec. 5.3.1.

5.4.4 Potassium iodide starch paper.

5.5 Reagents for distillation

5.5.1 Sodium hydroxide (1.25N). See Sec. 5.4.2.

5.5.2 Bismuth nitrate (0.062M), $Bi(NO)_3 \cdot\cdot 5H_2O$. Dissolve 30 g of $Bi(NO)_3 \cdot\cdot 5H_2O$ in 100 mL of water. While stirring, add 250 mL of glacial acetic acid, CH_3COOH. Stir until dissolved and dilute to 1 liter with water.

5.5.3 Sulfamic acid (0.4N), H_2NSO_3H. Dissolve 40 g of H_2NSO_3H in 1 liter of water.

5.5.4 Sulfuric acid (18N), H_2SO_4. Slowly and carefully add 500 mL of concentrated H_2SO_4 to 500 mL of water.

5.5.5 Magnesium chloride solution (2.5M), $MgCl_2 \cdot\cdot 6H_2O$. Dissolve 510 g of $MgCl_2 \cdot\cdot 6H_2O$ in 1 liter of water.

5.5.6 Lead acetate paper.

5.5.7 Stock potassium cyanide solutions -- Refer to Method 9014 for the preparation of stock cyanide solutions and calibration standards.

6.0 SAMPLE COLLECTION, PRESERVATION AND HANDLING

6.1 Samples should be collected in plastic or glass containers. All containers must be thoroughly cleaned and rinsed.

6.2 Oxidizing agents such as chlorine decompose most cyanides. To determine whether oxidizing agents are present, test a drop of the sample with potassium iodide-starch test paper. A blue color indicates the need for treatment. Add 0.1N sodium arsenite solution a few mL at a time until a drop of sample produces no color on the indicator paper. Add an additional 5 mL of sodium arsenite solution for each liter of sample. Ascorbic acid can be used

as an alternative although it is not as effective as arsenite. Add a few crystals of ascorbic acid at a time until a drop of sample produces no color on the indicator paper. Then add an additional 0.6 g of ascorbic acid for each liter of sample volume.

6.3 Aqueous samples must be preserved by adding 50% sodium hydroxide until the pH is greater than or equal to 12 at the time of collection.

6.4 Samples should be chilled to 4 • C.

6.5 When properly preserved, cyanide samples can be stored for up to 14 days prior to sample preparation steps.

6.6 Solid and oily wastes may be extracted prior to analysis by Method 9013. It uses a dilute NaOH solution (pH = 12) as the extractant. This yields extractable cyanide.

6.7 If fatty acids, detergents, and surfactants are a problem, they may be extracted using the following procedure. Acidify the sample with acetic acid (1.6M) to pH 6.0 to 7.0.

CAUTION: This procedure can produce lethal HCN gas.

Extract with isooctane, hexane, or chloroform (preference in order named) with solvent volume equal to 20% of the sample volume. One extraction is usually adequate to reduce the compounds below the interference level. Avoid multiple extractions or a long contact time at low pH in order to keep the loss of HCN at a minimum. When the extraction is completed, immediately raise the pH of the sample to above 12 with 50% NaOH solution.

7.0 PROCEDURE

7.1 Pretreatment for cyanides amenable to chlorination

7.1.1 This test must be performed under amber light. $K_3[Fe\text{-}(CN)_6]$ may decompose under UV light and hence will test positive for cyanide amenable to chlorination if exposed to fluorescent lighting or sunlight. Two identical sample aliquots are required to determine cyanides amenable to chlorination.

7.1.2 To one 500 mL sample or to a sample diluted to 500 mL, add calcium hypochlorite solution dropwise while agitating and maintaining the pH between 11 and 12 with 1.25N sodium hydroxide until an excess of chlorine is present as indicated by KI-starch paper turning blue. The sample will be subjected to alkaline chlorination by this step.

CAUTION: The initial reaction product of alkaline chlorination is the very toxic gas cyanogen chloride; therefore, it is necessary that this reaction be performed in a hood.

7.1.3 Test for excess chlorine with KI-starch paper and maintain this excess for one hour with continuous agitation. A distinct blue color on the test paper indicates a sufficient chlorine level. If necessary, add additional calcium hypochlorite solution.

7.1.4 After one hour, add 1 mL portions of 0.1N sodium arsenite until KI-starch paper shows no residual chlorine. Add 5 mL of excess sodium arsenite to ensure the presence of excess reducing agent.

7.1.5 Analyze the total cyanide concentration of both the chlorinated and the unchlorinated samples by Method 9014 or 9213. The difference between the total cyanide concentration in the chlorinated and unchlorinated samples is equal to the cyanide amenable to chlorination.

7.2 Distillation procedure

7.2.1 Place 500 mL of sample, or sample diluted to 500 mL in the one liter boiling flask. Pipet 50 mL of 1.25N sodium hydroxide into the gas scrubber. If the apparatus in Figure 1 is used, add water until the spiral is covered. Connect the boiling flask, condenser, gas scrubber and vacuum trap.

7.2.2 Start a slow stream of air entering the boiling flask by adjusting the vacuum source. Adjust the vacuum so that approximately two bubbles of air per second enter the boiling flask through the air inlet tube.

7.2.3 If samples are known or suspected to contain sulfide, add 50 mL of 0.062M bismuth nitrate solution through the air inlet tube. Mix for three minutes. Use lead acetate paper to check the sample for the presence of sulfide. A positive test is indicated by a black color on the paper.

7.2.4 If samples are known or suspected to contain nitrate or nitrite, or if bismuth nitrate was added to the sample, add 50 mL of 0.4N sulfamic acid solution through the air inlet tube. Mix for three minutes.

NOTE: Excessive use of sulfamic acid could create method bias.

7.2.5 Slowly add 50 mL of 18N sulfuric acid through the air inlet tube. Rinse the tube with water and allow the airflow to mix the flask contents for three minutes. Add 20 mL of 2.5M magnesium chloride through the air inlet and wash the inlet tube with a stream of water.

7.2.6 Heat the solution to boiling. Reflux for one hour. Turn off heat and continue the airflow for at least 15 minutes. After cooling the boiling flask, and closing the vacuum source, disconnect the gas scrubber.

7.2.7 Transfer the solution from the scrubber into a 250-mL volumetric flask. Rinse the scrubber into the volumetric flask. Dilute to volume with water.

7.2.8 Proceed to the cyanide determinative methods given in Methods 9014 or 9213. If the distillates are not analyzed immediately, they should be stored at 4 •C in tightly sealed flasks.

8.0 QUALITY CONTROL

8.1 All quality control data should be maintained and available for easy reference or inspection.

8.2 Employ a minimum of one reagent blank per analytical batch or one in every 20 samples to determine if contamination or any memory effects are occurring.

8.3 Analyze check standards with every analytical batch of samples. If the standards are not within 15% of the expected value, then the samples must be reanalyzed.

8.4 Run one replicate sample for every 20 samples. A replicate sample is a sample brought through the entire sample preparation and analytical process. The CV of the replicates should be 20% or less. If this criterion is not met, the samples should be reanalyzed.

8.5 Run one matrix spiked sample every 20 samples to check the efficiency of sample distillation by adding cyanide from the working standard or intermediate standard to 500 mL of sample to ensure a concentration of approximately 40 µg/L. The matrix spiked sample is brought through the entire sample preparation and analytical process.

8.6 It is recommended that at least two standards (a high and a low) be distilled and compared to similar values on the curve to ensure that the distillation technique is reliable. If distilled standards do not agree within ± 10% of the undistilled standards, the analyst should find the cause of the apparent error before proceeding.

8.7 The method of standard additions shall be used for the analysis of all samples that suffer from matrix interferences such as samples which contain sulfides.

9.0 METHOD PERFORMANCE

9.1 The titration procedure using silver nitrate is used for measuring concentrations of cyanide exceeding 0.1 mg/L. The colorimetric procedure is used for concentrations below 1 mg/L of cyanide and is sensitive to about 0.02 mg/L.

9.2 EPA Method 335.2 (sample distillation with titration) reports that in a single laboratory using mixed industrial and domestic waste samples at concentrations of 0.06 to 0.62 mg/L CN^-, the standard deviations for precision were ± 0.005 to ± 0.094, respectively. In a single laboratory using mixed industrial and domestic waste samples at concentrations of 0.28 and 0.62 mg/L CN^-, recoveries (accuracy) were 85% and 102%, respectively.

9.3 In two additional studies using surface water, ground water, and landfill leachate samples, the titration procedure was further evaluated. The concentration range used in these studies was 0.5 to 10 mg/L cyanide. The detection limit was found to be 0.2 mg/L for both total and amenable cyanide determinations. The precision (CV) was 6.9 and 2.6 for total cyanide determinations and 18.6 and 9.1 for amenable cyanide determinations. The mean recoveries were 94% and 98.9% for total cyanide, and 86.7% and 97.4% for amenable cyanide.

10.0 REFERENCES

1. 1985 Annual Book of ASTM Standards, Vol. 11.01; "Standard Specification for Reagent Water"; ATSM: Philadelphia, PA, 1985,; D1193-77.

2. 1982 Annual Book ASTM Standards, Part 19; "Standard Test Methods for Cyanide in Water"; ASTM: Philadelphia, PA, 1982; 2036-82.

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FIGURE 1.
APPARATUS FOR CYANIDE DISTILLATION

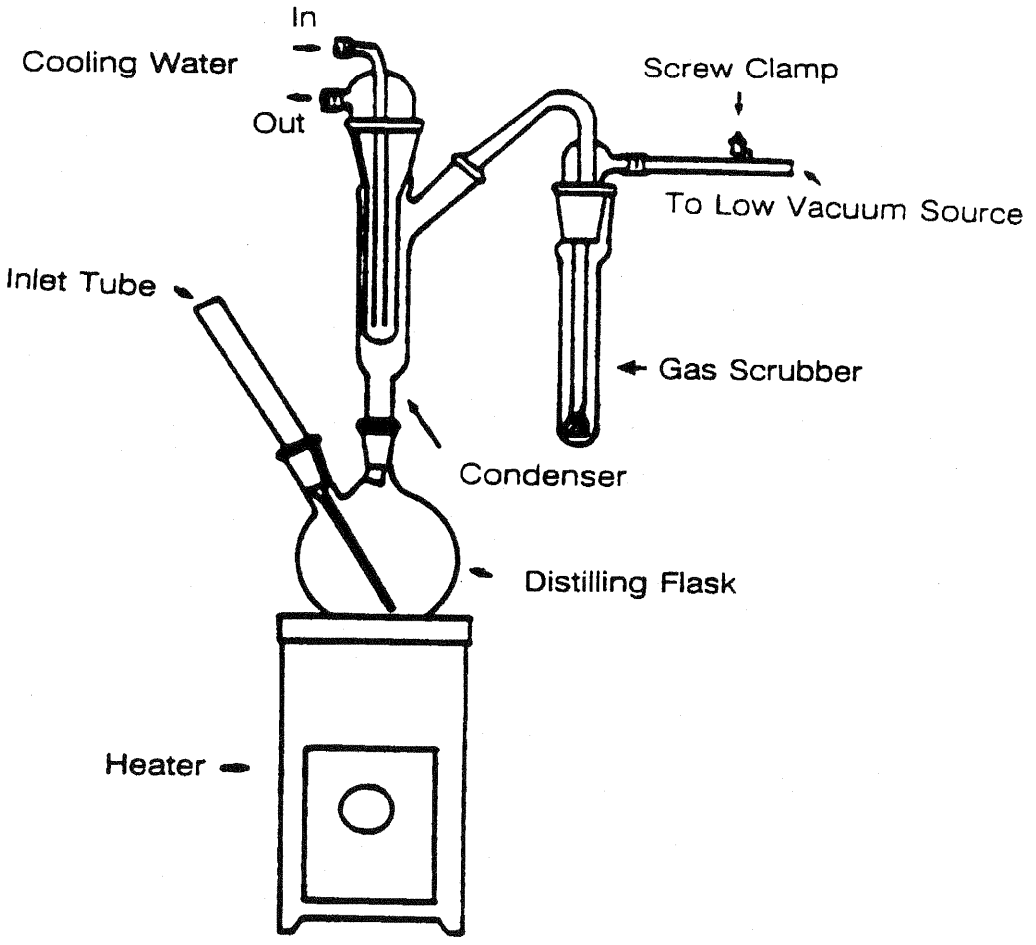
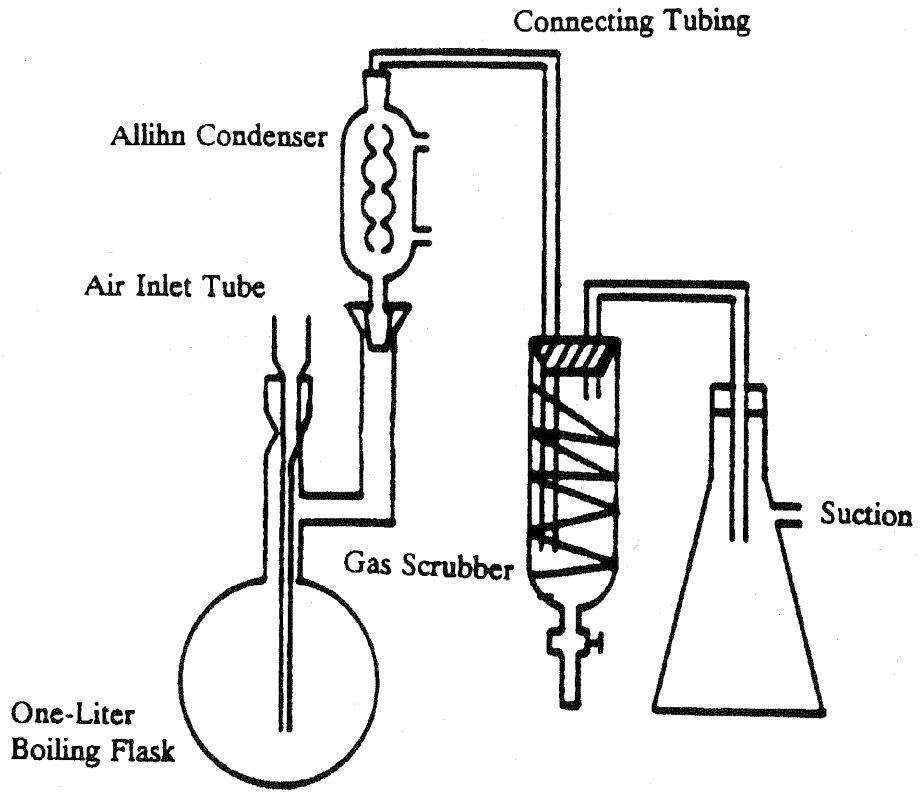


FIGURE 2.
APPARATUS FOR CYANIDE DISTILLATION



TOTAL AND AMENABLE CYANIDE: DISTILLATION

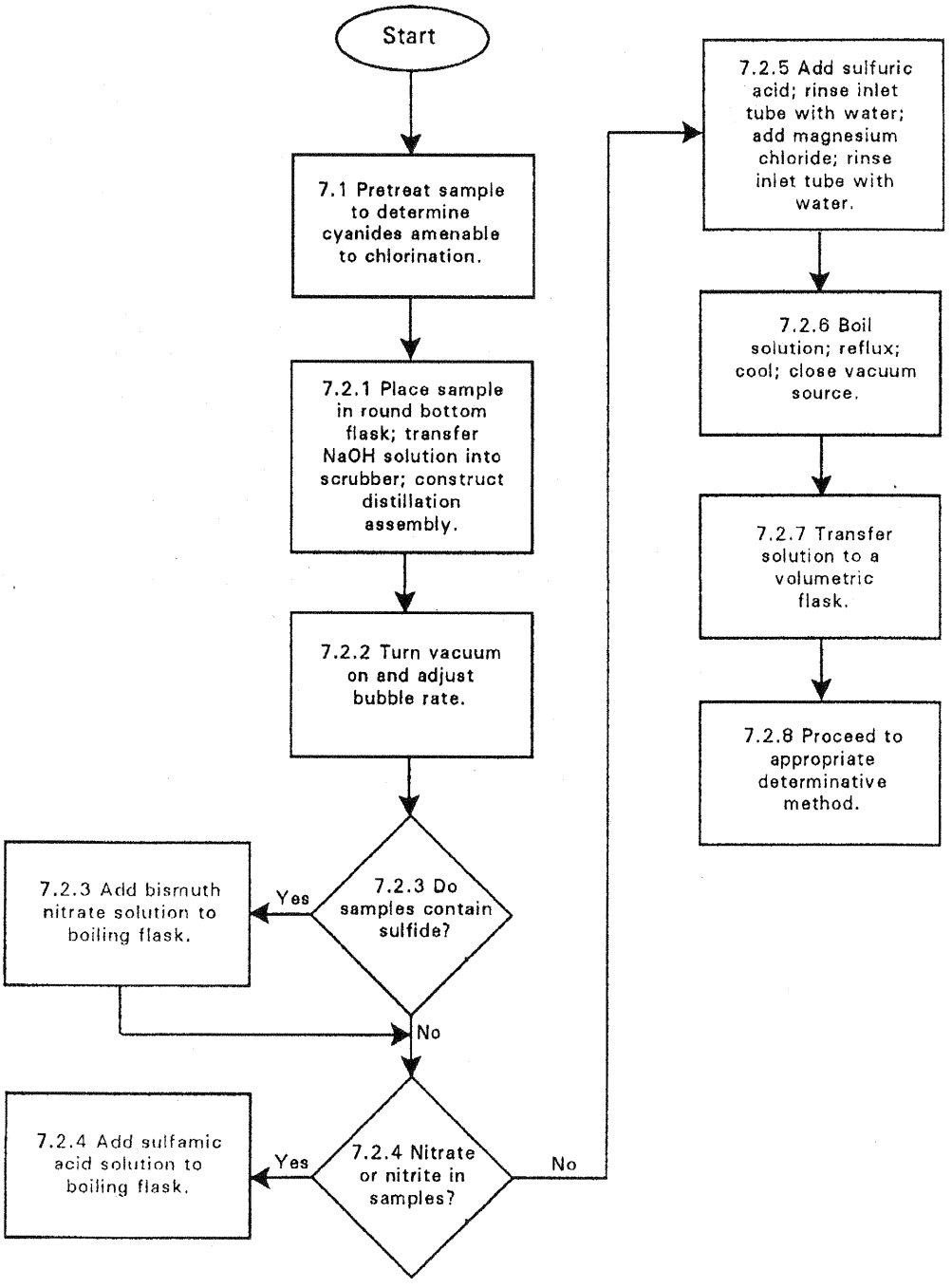


Table 7.2-1. Analytical Methods

Analytical Method	Parameter	Preparation Methods	
		Water/Aqueous	Soil/Solid
GC			
SW8011	Ethylene dibromide (EDB)	8011, 5030B	N/A
SW8015B	TPH volatiles	5030B, 5031	5035A
SW8015B	TPH extractables	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8021B	Aromatic and halogenated volatile organics	5030B	3585, 5021, 5035A
SW8070A	Nitrosamines	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8081A	Organochlorine pesticides	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8082	PCBs	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8141A	Organophosphorus compounds	3510C, 3520C, 3535	3540C, 3541, 3545
SW8151A	Chlorinated herbicides	see analytical method	see analytical method
RSK-175	Soil gasses in water	see analytical method	N/A
GC/MS			
SW8260B	Volatile organics	5030B, 5031, 5032	3585, 5021, 5032, 5035A
SW8270C	Semivolatile organics	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
TO-14A	Volatile Organics in Air	N/A	N/A
GC/MS SIM			
SW8270C SIM	Polynuclear aromatic hydrocarbons (PAHs)	3510C, 3520C	3540C, 3541, 3545, 3550B
HRGC/LRMS			
SW8280	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HRGC/HRMS			
SW8290	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HPLC			
SW8310	Polynuclear aromatic hydrocarbons (PAHs)	3510C, 3520C	3540C, 3541, 3550B
SW8330	Explosives residues	see analytical method	see analytical method
HPLC/MS & HPLC/MS/MS			
SW8321A	Chlorinated herbicides by HPLC-MS	3510C, 3520C	3540C, 3541, 3550B
SW8321A (Mod)	Explosives by HPLC-MS	3535A	3550B
SW8321A (Mod)	Perchlorate by HPLC-MS-MS	see analytical method	see analytical method
ICP-AES/ICP-MS/GFAA/CVAA			
SW6010B	Trace metals by ICP-AES	3005A, 3010A, 3015	3050B, 3051
SW6020	Trace metals by ICP-MS	3005A, 3010A, 3015	3050B, 3051
SW7041	Antimony	3005A	see analytical method
SW7060A, SW7740	Arsenic, Selenium	see analytical method	3050B
SW7131A, SW7191, SW7421, SW7521, SW7841, SW7911	Cadmium, Chromium (+3), Lead, Nickel, Thallium, Vanadium	3015, 3020A	3050B, 3051
SW7470A	Mercury (water)	see analytical method	N/A
SW7471A	Mercury (soil)	N/A	See analytical method
Wet Chemistry			
SW7196A	Hexavalent chromium	see analytical method	3060A
SW9010B	Total and Amenable Cyanide (distillation)	see analytical method	9013
SW9012A	Total and Amenable Cyanide (colorimetric)	see analytical method	9013
314.0	Perchlorate anion	see analytical method	As per EPA 300.0
SW9056	Common anions	see analytical method	As per EPA 300.0

Table 7.2-1. Analytical Methods

Analytical Method	Parameter	Preparation Methods	
		Water/Aqueous	Soil/Solid
GC			
SW8011	Ethylene dibromide (EDB)	8011, 5030B	N/A
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SW8021B	Aromatic and halogenated volatile organics	5030B	3585, 5021, 5035A
SW8070A	Nitrosamines	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8081A	Organochlorine pesticides	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8082	PCBs	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
SW8141A	Organophosphorus compounds	3510C, 3520C, 3535	3540C, 3541, 3545
SW8151A	Chlorinated herbicides	see analytical method	see analytical method
RSK-175	Soil gasses in water	see analytical method	N/A
GC/MS			
SW8260B	Volatile organics	5030B, 5031, 5032	3585, 5021, 5032, 5035A
SW8270C	Semivolatile organics	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
TO-14A	Volatile Organics in Air	N/A	N/A
GC/MS SIM			
SW8270C SIM	Polynuclear aromatic hydrocarbons (PAHs)	3510C, 3520C	3540C, 3541, 3545, 3550B
HRGC/LRMS			
SW8280	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HRGC/HRMS			
SW8290	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HPLC			
SW8310	Polynuclear aromatic hydrocarbons (PAHs)	3510C, 3520C	3540C, 3541, 3550B
SW8330	Explosives residues	see analytical method	see analytical method
HPLC/MS & HPLC/MS/MS			
SW8321A	Chlorinated herbicides by HPLC-MS	3510C, 3520C	3540C, 3541, 3550B
SW8321A (Mod)	Explosives by HPLC-MS	3535A	3550B
SW8321A (Mod)	Perchlorate by HPLC-MS-MS	see analytical method	see analytical method
ICP-AES/ICP-MS/GFAA/CVAA			
SW6010B	Trace metals by ICP-AES	3005A, 3010A, 3015	3050B, 3051
SW6020	Trace metals by ICP-MS	3005A, 3010A, 3015	3050B, 3051
SW7041	Antimony	3005A	see analytical method
SW7060A, SW7740	Arsenic, Selenium	see analytical method	3050B
SW7131A, SW7191, SW7421, SW7521, SW7841, SW7911	Cadmium, Chromium (+3), Lead, Nickel, Thallium, Vanadium	3015, 3020A	3050B, 3051
SW7470A	Mercury (water)	see analytical method	N/A
SW7471A	Mercury (soil)	N/A	See analytical method
Wet Chemistry			
SW7196A	Hexavalent chromium	see analytical method	3060A
SW9010B	Total and Amenable Cyanide (distillation)	see analytical method	9013
SW9012A	Total and Amenable Cyanide (colorimetric)	see analytical method	9013
314.0	Perchlorate anion	see analytical method	As per EPA 300.0
SW9056	Common anions	see analytical method	As per EPA 300.0

Table 7.2-1. Analytical Methods

Analytical Method	Parameter	Preparation Methods	
		Water/Aqueous	Soil/Solid
GC			
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SW8070A	Nitrosamines	3510C, 3520C	3540C, 3541, 3545, 3550B
SW8081A	Organochlorine pesticides	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
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SW8141A	Organophosphorus compounds	3510C, 3520C, 3535	3540C, 3541, 3545
SW8151A	Chlorinated herbicides	see analytical method	see analytical method
RSK-175	Soil gasses in water	see analytical method	N/A
GC/MS			
SW8260B	Volatile organics	5030B, 5031, 5032	3585, 5021, 5032, 5035A
SW8270C	Semivolatile organics	3510C, 3520C, 3535	3540C, 3541, 3545, 3550B
TO-14A	Volatile Organics in Air	N/A	N/A
GC/MS SIM			
SW8270C SIM	Polynuclear aromatic hydrocarbons (PAHs)	3510C, 3520C	3540C, 3541, 3545, 3550B
HRGC/LRMS			
SW8280	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HRGC/HRMS			
SW8290	Dibenzo-*p*-dioxins and dibenzofurans	see analytical methods	see analytical methods
HPLC			
SW8310	Polynuclear aromatic hydrocarbons (PAHs)	3510C, 3520C	3540C, 3541, 3550B
SW8330	Explosives residues	see analytical method	see analytical method
HPLC/MS & HPLC/MS/MS			
SW8321A	Chlorinated herbicides by HPLC-MS	3510C, 3520C	3540C, 3541, 3550B
SW8321A (Mod)	Explosives by HPLC-MS	3535A	3550B
SW8321A (Mod)	Perchlorate by HPLC-MS-MS	see analytical method	see analytical method
ICP-AES/ICP-MS/GFAA/CVAA			
SW6010B	Trace metals by ICP-AES	3005A, 3010A, 3015	3050B, 3051
SW6020	Trace metals by ICP-MS	3005A, 3010A, 3015	3050B, 3051
SW7041	Antimony	3005A	see analytical method
SW7060A, SW7740	Arsenic, Selenium	see analytical method	3050B
SW7131A, SW7191, SW7421, SW7521, SW7841, SW7911	Cadmium, Chromium (+3), Lead, Nickel, Thallium, Vanadium	3015, 3020A	3050B, 3051
SW7470A	Mercury (water)	see analytical method	N/A
SW7471A	Mercury (soil)	N/A	See analytical method
Wet Chemistry			
SW7196A	Hexavalent chromium	see analytical method	3060A
SW9010B	Total and Amenable Cyanide (distillation)	see analytical method	9013
SW9012A	Total and Amenable Cyanide (colorimetric)	see analytical method	9013
314.0	Perchlorate anion	see analytical method	As per EPA 300.0
SW9056	Common anions	see analytical method	As per EPA 300.0

6.0 SCREENING ANALYTICAL METHODS

Screening or non-definitive analytical methods can be useful tools in generating quality environmental data. These methods should be selected as part of the overall systematic planning process and can serve to minimize sampling error, thereby minimizing costs. The various analytical screening methods contained in this section are shown in Table 6-1. This section includes brief descriptions of the methods and QC required for screening procedures commonly used to conduct work efforts. The methods and QC procedures were taken from *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (USEPA SW-846, Third Edition, and its subsequent updates), *Methods for Chemical Analysis of Water and Waste* (USEPA 1979), *ASTM Annual Book of Standards* (1993), and from various manufacturers' literature. Specific methods for a project are to be selected from Table 6-1 unless a variance is requested. The list below is not intended to be all inclusive. Other appropriate methods based on site-specific PQOs should be provided in the project QAPP. Also, it is understood that some of these methods may be performed in a laboratory, and if accompanied by the appropriate QC procedures and documentation, the data generated may be considered as definitive.

Table 6-1. Screening Analytical Methods

Method	Parameter
SW846 (3550)	Moisture (as % solids)
SW1020A / SW1010/ SW1030	Ignitability
SW1110	Corrosivity
SW9040B	pH (water)
SW9045C	pH (soil)
SW9050A	Conductance
SW9060	Total organic carbon
E160.1	Filterable residue
E160.2	Nonfilterable residue
E170.1	Temperature
E180.1	Turbidity
E310.1	Alkalinity
E360.1	Dissolved oxygen
Organic vapor-analysis using an instrument equipped with an flame ionization detector (FID) or photoionization detector (PID) or other selective detector (e.g., for explosives).	Soil gas screening-halogenated, aromatic, and petroleum hydrocarbons. Screening of drill cuttings, borings, monitoring wells, and temporary probes.
ASTM D422	Particle size
ASTM D1498	Oxidation-reduction potential
ASTM D3416	Methane
SW4020	PCBs by Immunoassay
SW4030	TPH by Immunoassay
SW4035	PAHs by Immunoassay
SW4050	TNT by Immunoassay
SW4051	RDX by Immunoassay

7.2.2.2 Method SW8270C – Semivolatile Organics

Semivolatile organic compounds (SVOCs) (also known as base/neutral and acid extractables) in water and soil samples are analyzed using Method SW8270C. This technique quantitatively determines the concentration of a number of SVOCs. Samples are extracted and both base/neutral and acid extracts are then concentrated through evaporation. Compounds of interest are separated and quantified using a capillary column GC/MS. The analytes and RLs for this method are listed in Table 7.2.2.2-1.

Tuning - The mass spectrometer must be hardware tuned to give an acceptable spectrum for decafluorotriphenylphosphine (DFTPP). The tuning acceptance criteria are given in the following list in terms of ion abundances for each specified mass:

- mass 51 30 – 60 percent of mass 198
- mass 68 less than 2 percent of mass 69
- mass 70 less than 2 percent of mass 69
- mass 127 40 – 60 percent of mass 198
- mass 197 less than 1 percent of mass 198
- mass 198 base peak, 100 percent relative abundance
- mass 199 5 – 9 percent of mass 198
- mass 275 10 – 30 percent of mass 198
- mass 365 greater than 1 percent of mass 198
- mass 441 present, but less than mass 443
- mass 442 greater than 40 percent of mass 198
- mass 443 17 – 23 percent of mass 442

These criteria must be demonstrated each 12-hour shift during which samples are analyzed. No analyses may begin until these criteria are met.

The IS method is used for quantitation of analytes of interest. For quantitation, RFs are calculated from the base ion peak of a specific IS that is added to each calibration standard, blank, QC sample, and sample. Table 7.2.2.2-2 provides acceptance criteria for accuracy of spiked analytes and ISs, precision of duplicate/replicate analyses, and recommended IS associations. Also included in Table 7.2.2.2-2 are the marginal exceedances limits taken from the DoD QSM. AFCEE has set a policy that the minimum upper acceptance limits for LCS recoveries for aqueous and soil samples are 120% and 125% respectively. For this reason, the upper LCS contol limits and marginal exceedances limits are the same for some analytes. Table 7.2.2.4-1 identifies the QC checks, minimum frequencies, acceptance criteria, corrective actions, and flagging criteria.

6.1 METHOD DESCRIPTIONS

Section 6.1 contains subsections for each screening analytical procedure. Each subsection contains a brief method description and associated reporting limits, if applicable.

6.1.1 Methods SW1010/SW1020A/SW1030 – Ignitability

Method SW1010 makes use of the Pensky-Martens tester to determine the flash point of liquid samples, including those that form surface films and/or contain non-filterable suspended solids.

Method SW1020A makes use of the Setaflash Closed Tester to determine the flash point of liquids that have flash points between 0 and 110 °C and viscosities lower than 150 stokes at 25 °C. If a sample contains non-filterable suspended solids, use SW1010 (Pensky-Martens Ignitability) instead of Method SW1020.

Method SW1030 is used to determine the ignitability of solids and is suitable for the pastes, granular materials, solids that can be cut into strips, and powdery substances.

6.1.2 Method SW1110 – Corrosivity

This test exposes steel to liquid waste to determine the corrosivity of the waste.

6.1.3 Methods SW9040B (Water)/SW9045C (Soil) – pH

pH measurements shall be performed for aqueous samples using Method SW9040. pH measurements of soil or solid samples are performed using Method SW9045C. Measurements are determined electrometrically using either a glass electrode in combination with a reference potential, or a combination electrode. pH measurements are important tools for predicting the extent of contamination as well as providing information regarding the potential ionization forms of contaminants in groundwater. This can be used to predict their respective fate and transport.

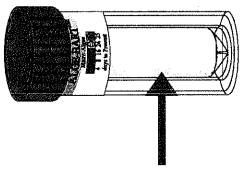
6.1.4 Method SW9050A – Conductance

Standard conductivity meters are used. Temperature is also reported. Conductivity is an important parameter used in fate and transport modeling of contaminants.

BART™ TEST FOR ALGE
MICRO-ALGAE

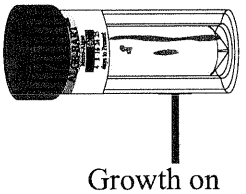
Present/Absent - observe a minimum 3 times a week.

ABSENT
(Negative - Non-aggressive)



Textile remains White.

PRESENT
(Positive - Aggressive)



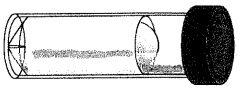
Growth on textile.

1. View test a minimum 3 times a week for 24 days.
2. Observe any growths/color changes.
3. Compare with descriptions below.

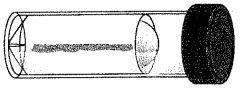
*Note: Refer to page bottom for approximate population

Advanced test information.

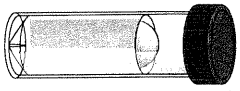
Determination of Dominant Bacteria



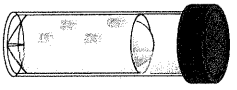
GREEN(**GG**) growth at or below water line - *Chlamydomonas*.



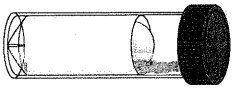
BRIGHT GREEN FUZZY(**FG**) patches of growth on textile - *Chlorophyceae*.



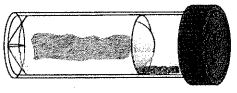
RED, ORANGE, or BROWN(**OB**) patches of growth on textile - *Diatoms & Desmids*.



LIGHT YELLOW to BEIGE(**YB**) patches of growth on textile - *Scenedesmus*.

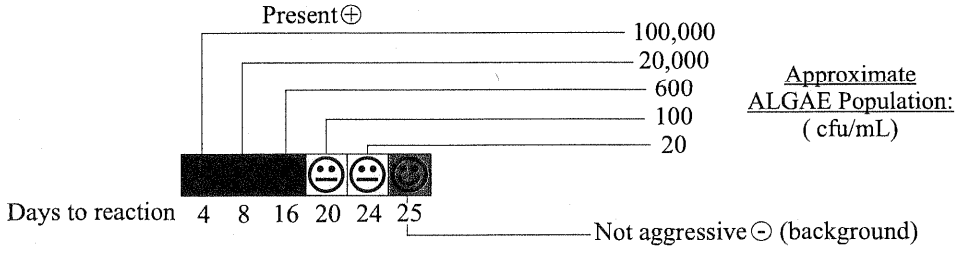


GREEN(**GF**) deposits floating in water and on floor of test - *Chlorella*.



DARK-GREEN, BLUE-GREEN, or BLACK(**DG**) growths at water line - Blue-green Algae (*Cyanobacter*).

Determination of Potential ALGAE Population - observe daily for reaction.

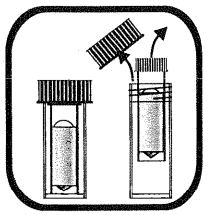


Made in Canada
© 2004 Droycon Bioconcepts Inc.
BART™ is a Trademark of DBI

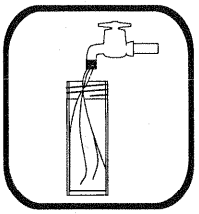
ALGE-BART™
For water and soils

The ALGE-BARTs contain a ball, dehydrated medium, and geo-textile. Add water sample until the water reaches the top of the textile. Below the ball, there is a layer of textile into which the algae can grow. Nutrients to support algal growth diffuse into the water sample from dehydrated medium deposits in the base of the tube.

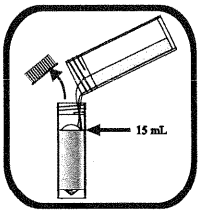
Algae include various plant-like microorganisms, which can photosynthesize using light as the energy source for growth. Several types of algae can grow in the ALGE-BARTs, including: Grass-Green Algae (*Chlorophyceae*), Blue-Green Algae (*Cyanobacteria*), Desmids, Diatoms, and Euglenoids. The ALGE-BART can be used as a simple presence/absence (P/A) test capable of indicating, to some extent, the population size and the types of algae present in the sample.



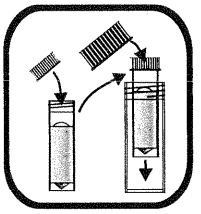
1. Remove the inner tube from the outer tube.



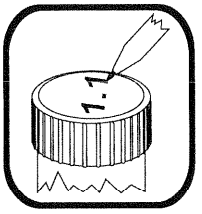
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample. ***Note:*** *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



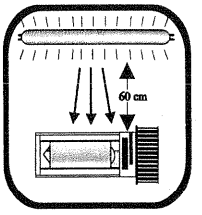
3. Fill the inner tube with sample until the level reaches the fill line. ***Note:*** *After removing the cap from the inner tube, set it down directly on a* ***clean surface.*** *To avoid contamination, do not invert the cap.*



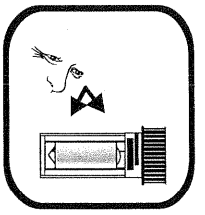
4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



5. Label the outer tube with the date and sample origin.



6. Illuminate the BART tube using fluorescent lighting and allow to incubate at room temperature.

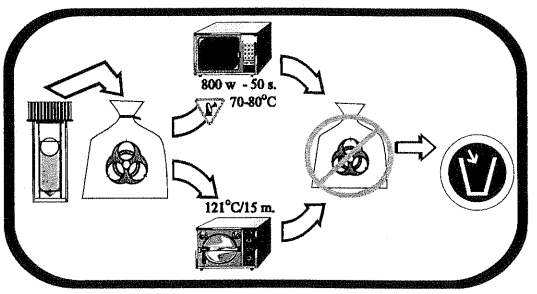


7. Check the BART visually for reaction daily.

HACH Company
P.O. Box 389
Loveland, CO 80539-0389
Telephone: (970) 669-3050
Fax: (970) 669-2932

For Technical Assistance,
Price Information and Ordering:
In the U.S.A.
Call toll-free 800-227-4224

In Europe, the Middle East, and Mediterranean Africa:
HACH Company, c/o Dr. Bruno Lange GmbH • Willstätterstr. 11 • D-40549 Düsseldorf, Germany
Telephone: +49/[0]211.52.88.0 • Fax: +49/[0]211.52.88.231



8. Safely dispose using a dedicated microwave oven or by autoclave.

Certificate of Analysis

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BART™ Type: ALGE-BART Batch #:

Release date*: Lot#:

Shipment date: Expiry date:

* Approval for release includes the following criteria: 1. confirmation of sterility for the vials and caps, 2. approval of the medium pellet as being appropriately formed and acceptable, 3. is sterile, and 4. responds in a typical way to inoculation and incubation using selected defined microbial cultures. Details of these criteria are included in our Web Site.

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Certificate Number:

This certificate was issued by Droycon Bioconcepts Inc., 315 Dewdney Ave., Regina, SK., Canada, S4N 0E7 as an assurance that the product listed above has passed through the quality control procedures considered essential to the successful use of the testing device.

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http://www.DBI.ca

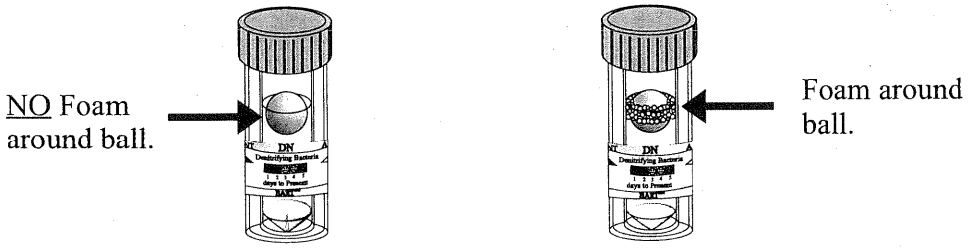
#8436

BART™ TEST FOR DN
DENITRIFYING BACTERIA

Present/Absent - observe daily for 4 days.

ABSENT
(Negative - Non-aggressive)

PRESENT
(Positive - Aggressive)



1. View test each day for 4 days.
2. Observe any growths.
3. Compare with description.

*Note: Refer to page bottom for approximate population

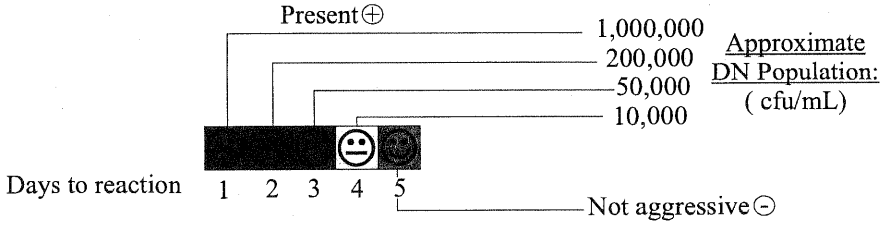
Advanced test information.

Determination of Dominant Bacteria



FOAM around ball **(FO)** - Denitrifying Bacteria.

Determination of Potential DN Population - observe daily for reaction.



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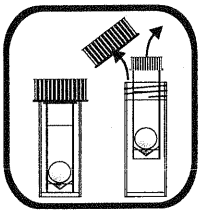
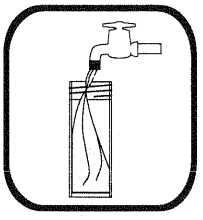
DN-BART™
For water and wastewater

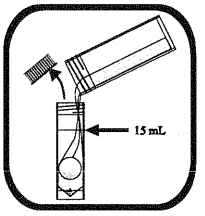
Denitrifying bacteria indicate the decomposition of waste organic nitrogenous materials. These bacteria reduce nitrate to nitrite and some continue nitrification to gaseous nitrogen (complete denitrification). In water, aggressive denitrifiers can indicate high concentrations of nitrates, and that the sample is probably anaerobic and relatively rich in organic matter. The presence of denitrifying bacteria can indicate that the water has been polluted by nitrogen-rich organics from sources such as compromised septic tanks, sewage systems, industrial and hazardous waste sites. If highly aggressive bacteria are detected, the water should be tested for the presence of coliform bacteria.



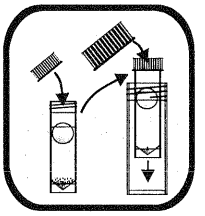
1. Remove the inner tube from the outer tube.



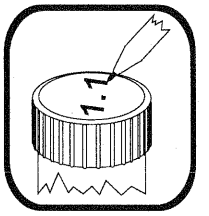
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



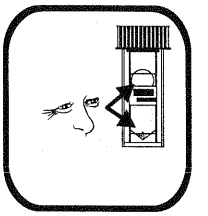
3. Fill the inner tube with sample until the level reaches the fill line.
Note: *After removing the cap from the inner tube, set it down directly on a* ***clean surface****. To avoid contamination, do not invert the cap.*



4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



5. Label the outer tube with the date and sample origin.



6. Place the BART tube away from direct sunlight and allow to incubate at room temperature. Check the BART visually for reaction daily.

HACH Company
P.O. Box 389
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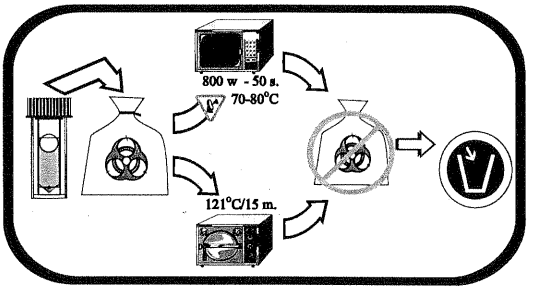

7. Safely dispose using a dedicated microwave oven or by autoclave.

Certificate of Analysis

This certificate confirms that the BART™ product listed by name, lot number, and batch number has been subjected to the full range of Quality Control procedures as outlined in "User Quality Control Manual in support of the BART Biodetection Technologies" published in 2002 by Droycon Bioconcepts Inc.

BART™ Type: DN-BART — Batch #:

Release date*: — Lot#:

Shipment date: — Expiry date:

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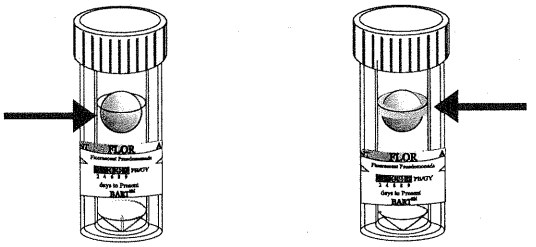
#8436

BART™ TEST FOR

Present/Absent - observe daily for 8 days.

ABSENT (Negative - Non-aggressive)	PRESENT (Positive - Aggressive)
The solution has NO glow around ball under U.V. light.	Glowing around ball under U.V. light.

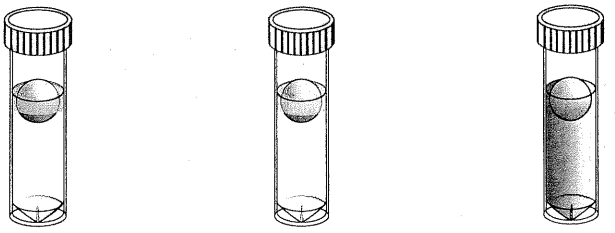


1. View test each day for 8 days.
2. Observe any growths/color changes.
3. Compare with descriptions.

*Note: Refer to page bottom for approximate population

Advanced test information.

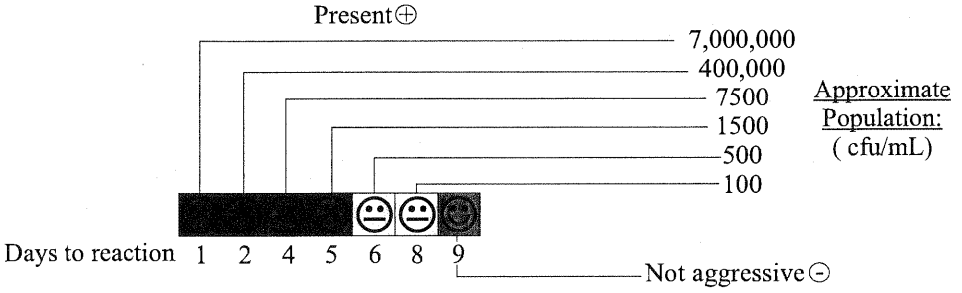
Determination of Dominant Bacteria



Pale Blue(PB) Glowing - *Pseudomonas aeruginosa.*	Greenish-Yellow(GY) glowing - *Pseudomonas fluorescens.*	Cloudiness(CL) - No glowing - Non-fluoresing pseudomonas.

*Note: A stamp collectors U.V. Light is adequate to view glowing.

Determination of Potential FLOR Population - observe daily for reaction.



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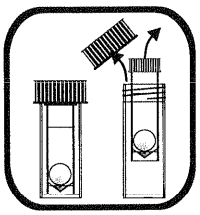
FLOR-BART™

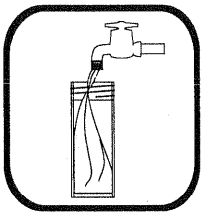
For water and wastewater

Pseudomonad bacteria are often present in waters that contain oxygen and are rich in organic pollutants (e.g., gasoline, jet fuel, solvents). The presence of pseudomonad bacteria may indicate that aerobic biodegradation is occurring and biofouling may also be happening within the system being tested. Some pseudomonad bacteria that produce the fluorescent pigments (pigments that glow in ultraviolet light) may be a hygiene risk. The faster that clouding and fluorescence happens, the more aggressive are the pseudomonad bacteria.

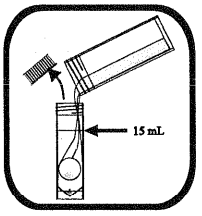
Pseudomonad bacteria can cause a range of problems in water, including slime formations, turbidity, taste and odor, corrosion, biodegradatrion, and hygiene risks. Pseudomonad bacteria produce distinctive odors such as "fishy" or "kerosene-like" odors. In recreational waters (such as swimming pools, hot tubs, restricted natural bathing sites), the presence of aggressive fluorescent pseudomonads can cause skin, eye, ear, and urinary tract infections.



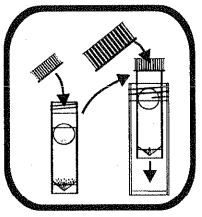
1. Remove the inner tube from the outer tube.



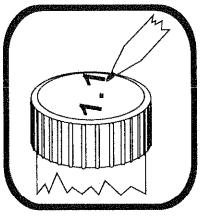
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



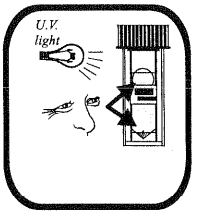
3. Fill the inner tube with sample until the level reaches the fill line.
Note: *After removing the cap from the inner tube, set it down directly on a* ***clean surface****. To avoid contamination, do not invert the cap.*



4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



5. Label the outer tube with the date and sample origin.



6. Place the BART tube away from direct sunlight and allow to incubate at room temperature. Check the BART daily visually for reaction and/or glowing under U.V. light.

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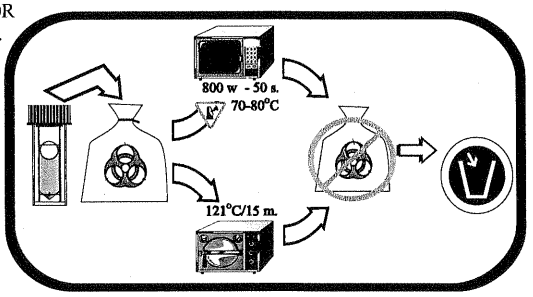

7. Safely dispose using a dedicated microwave oven or by autoclave.

Certificate of Analysis

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BART™ Type: FLOR-BART Batch #:

Release date*: Lot#:

Shipment date: Expiry date:

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#8436

BART™ TEST FOR HAB HETEROTROPHIC AEROBIC BACTERIA

Present/Absent - observe daily for 4 days.

ABSENT
(Negative - Non-aggressive)

The solution is Blue.



PRESENT
(Positive - Aggressive)



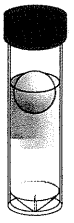
Bleaching of blue.

1. View test each day for 4 days.
2. Observe any color changes.
3. Compare with descriptions.

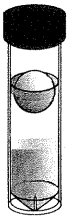
*Note: Refer to page bottom for approximate population

Advanced test information.

Determination of Dominant Bacteria

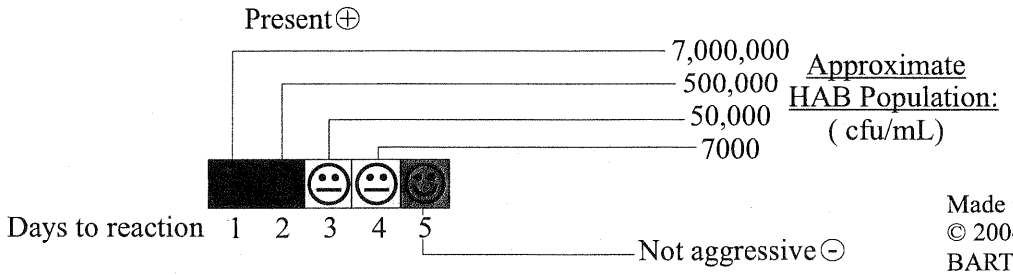


Blue Bleaching Up from Bottom **(UP)** - Aerobic Bacteria.



Blue Bleaching Down from Top **(DO)** - Anaerobic.

Determination of Potential HAB Population - observe daily for reaction.



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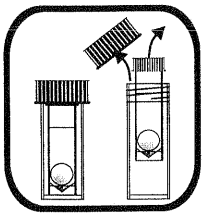
HAB-BART™

For water and wastewater

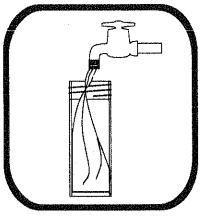
Often you need to test water for the presence of bacteria without trying to determine the particular groups of bacteria that may be present. When total aerobic bacteria are present and active, the blue dye in the BART bleaches either from the bottom up or the top down.

The test measure the ability of the total aerobic bacteria to respire while degrading the various nutrients in the dehydrated culture medium. Methylene blue, the dye, acts as an alternative to oxygen for microbial respiration. When the microbes respire, the methylene blue changes to a colorless form. The faster the dye is bleached, the greater the level of respiration and the larger or more aggressive the total aerobic bacteria population.

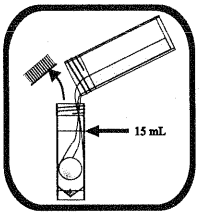
Aerobic bacteria can cause several problems in water, including slime formations, turbidity, taste and odor, corrosion, health risks, and hygiene risks. When a problem is detected, you may want to conduct more testing to determine precisely the nature of the microbial problem. You can use other BARTs to detect several types of bacteria.



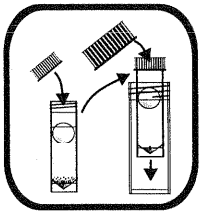
1. Remove the inner tube from the outer tube.



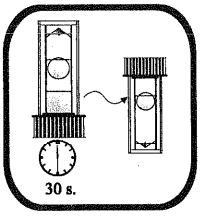
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



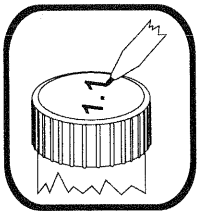
3. Fill the inner tube with sample until the level reaches the fill line.
Note: *After removing the cap from the inner tube, set it down directly on a* ***clean surface****. To avoid contamination, do not invert the cap.*



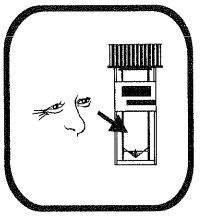
4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



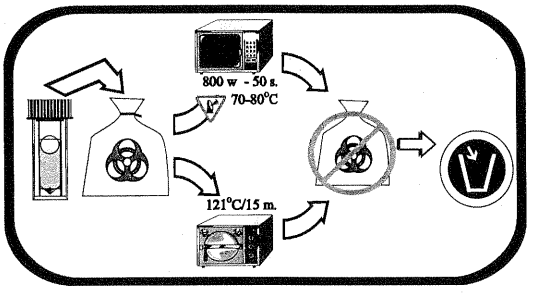
5. Invert tube for 30 seconds to dissolve the dye under the cap. Set tube upright for media to dissolve slowly.



6. Label the outer tube with the date and sample origin.



7. Place the BART tube away from direct sunlight and allow to incubate at room temperature. Check the BART visually for reaction daily.



8. Safely dispose using a dedicated microwave oven or by autoclave.

HACH®
HACH Company
P.O. Box 389
Loveland, CO 80539-0389
Telephone: (970) 669-3050
Fax: (970) 669-2932

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In Europe, the Middle East, and Mediterranean Africa:
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Telephone: +49/[0]211.52.88.0 • Fax: +49/[0]211.52.88.231

Certificate of Analysis

This certificate confirms that the BART™ product listed by name, lot number, and batch number has been subjected to the full range of Quality Control procedures as outlined in "User Quality Control Manual in support of the BART Biodetection Technologies" published in 2002 by Droycon Bioconcepts Inc.

BART™ Type: HAB-BART Batch #:

Release date*: Lot#:

Shipment date: Expiry date:

* Approval for release includes the following criteria: 1. confirmation of sterility for the vials and caps, 2. approval of the medium pellet as being appropriately formed and acceptable, 3. is sterile, and 4. responds in a typical way to inoculation and incubation using selected defined microbial cultures. Details of these criteria are included in our Web Site.

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Certificate Number:

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For more information, visit our web-site at:
http://www.DBI.ca

#8436

BART™ TEST FOR IRB
IRON RELATED BACTERIA

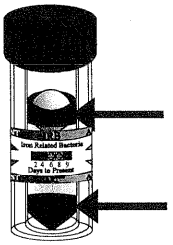
Present/Absent - observe daily for 8 days.

ABSENT
(Negative - Non-aggressive)

The solution has NO brown slime.



PRESENT
(Positive - Aggressive)



A **Brown** slime ring or foam around the ball,

and/or

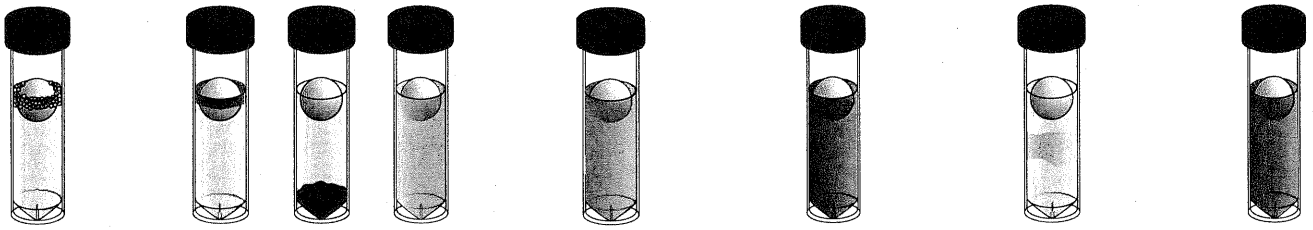
A **Brown** slime growth at the base of tube.

1. View test each day for 8 days.
2. Observe any growths/color changes.
3. Compare with descriptions.

*Note: Refer to page bottom for approximate population

Advanced test information.

Determination of Dominant Bacteria



FO — FOAM(**FO**) around ball - Anaerobic Bacteria.

BR, BG, BC — BROWN RINGS(**BR**), GEL(**BG**), and/or CLOUDS(**BC**) - IRB.

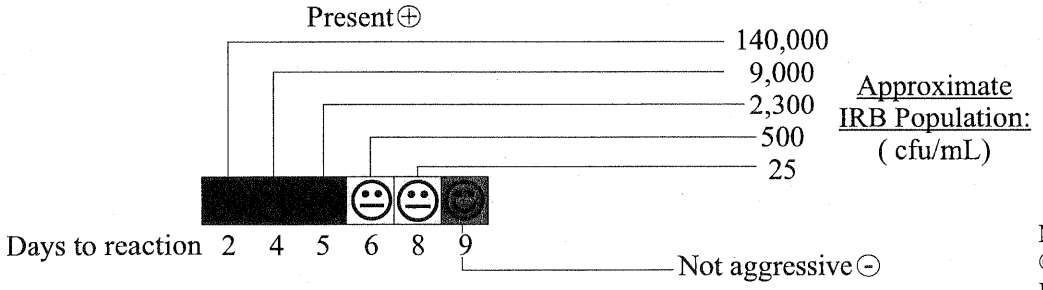
GC — Solution GREEN-CLOUDY(**GC**) - Pseudomonads.

RC — Solution RED-CLOUDY(**RC**) - Enteric Bacteria.

CL — Solution CLOUDY(**CL**) - Heterotrophic Bacteria.

BL — Solution BLACK(**BL**) - Pseudomonads and Enterics.

Determination of Potential IRB Population - observe daily for reaction.



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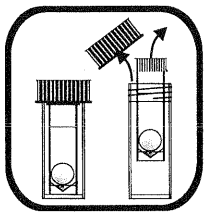
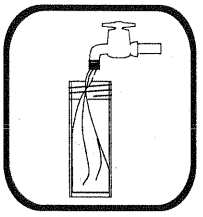
IRB-BART™
For water and wastewater

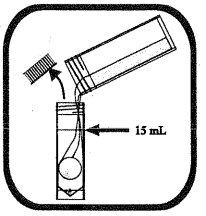
Iron-Related bacteria are difficult to enumerate because they are subdivided into several groupings (e.g., iron-oxidizing and iron-reducing bacteria). Iron-related bacteria can use iron in their metabolism. Taste and odor problems and "red water" are common symptoms of problems due to iron-related bacteria. These bacteria function under different reduction-oxidation (redox) conditions and use a variety of substrates for growth. The IRB-BARTs can detect both iron-oxidizing and iron-reducing bacteria. Common iron-related bacteria include *Gallionella*, *Crenothrix*, *Sphaerotilus*, *Siderocapsa*, and *Thiobacillus ferroxidans*.



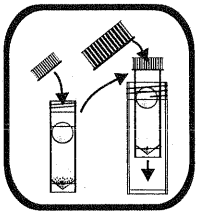
1. Remove the inner tube from the outer tube.



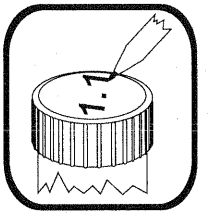
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



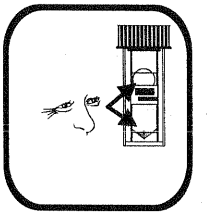
3. Fill the inner tube with sample until the level reaches the fill line.
Note: *After removing the cap from the inner tube, set it down directly on a* ***clean surface****. To avoid contamination, do not invert the cap.*



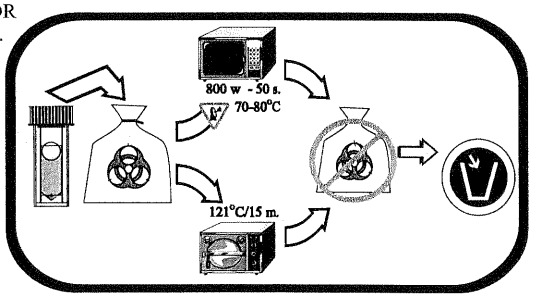
4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



5. Label the outer tube with the date and sample origin.



6. Place the BART tube away from direct sunlight and allow to incubate at room temperature. Check the BART visually for reaction daily.



7. Safely dispose using a dedicated microwave oven or by autoclave.

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Fax: (970) 669-2932

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BART™ Type: IRB-BART — Batch #:

Release date*: — Lot#:

Shipment date: — Expiry date:

* Approval for release includes the following criteria: 1. confirmation of sterility for the vials and caps, 2. approval of the medium pellet as being appropriately formed and acceptable, 3. is sterile, and 4. responds in a typical way to inoculation and incubation using selected defined microbial cultures. Details of these criteria are included in our Web Site.

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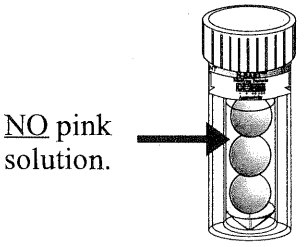
http://www.DBI.ca

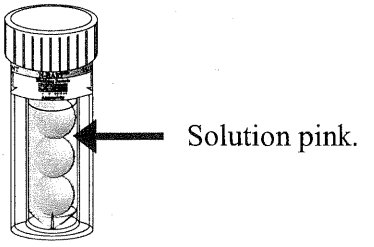
BART™ TEST FOR N NITRIFYING BACTERIA

Present/Absent - observe at day 5.

ABSENT
(Negative - Non-aggressive)

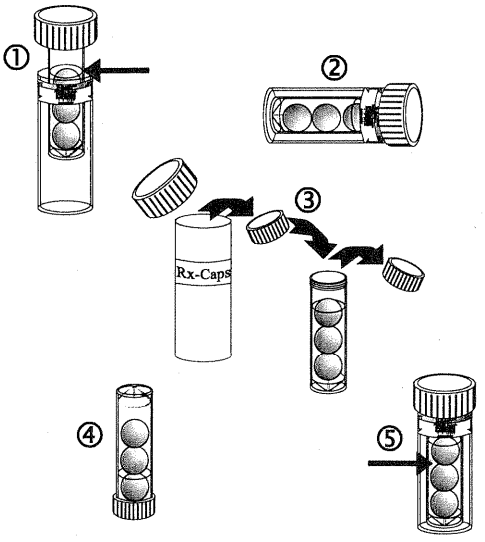


PRESENT
(Positive - Aggressive)



*Note: Refer to page bottom for approximate population

N-BART Instructions.



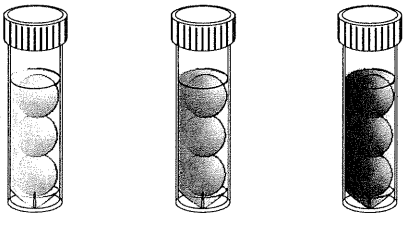
1. Remove inner vial and add water sample to fill line.

2. Replace inner vial and place on side for 5 days.

3. On day 5 of test remove the inner test vial from the outer and replace cap with cap from Rx tube.

4. Invert tube for 3 minutes and return upright to outer tube.

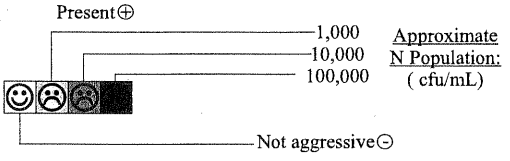
5. After 3 hours observe for pink color change.



1,000 10,000 100,000

Approximate N Population:(cfu/mL)

Determination of Potential N Population - observe daily for reaction.



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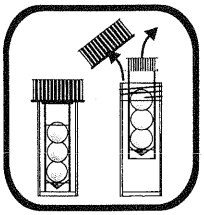
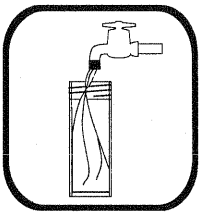
N-BART™

Nitrifying bacteria recycle organic nitrogenous materials from ammonium (the endpoint for the decomposition of proteins) to nitrates. In water, aggressive nitrifiers can produce high concentrations of nitrates.

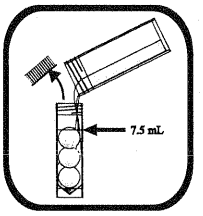
Nitrates in water can be a potential health risk, particularly to infants who have not yet developed a tolerance to nitrates. Aggressive nitrifying bacteria in waters may indicate the latter stages of aerobic degradation of nitrogen-rich organic matter. This can indicate that the water may have been polluted by nitrogen-rich organics from sources such as compromised septic tanks, sewage systems, industrial and hazardous waste sites and is undergoing an aerobic form of degradation.



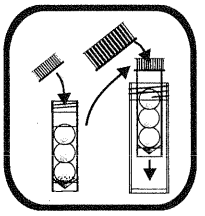
1. Remove the inner tube from the outer tube.



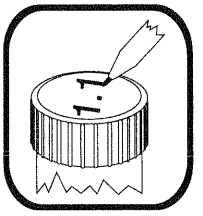
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



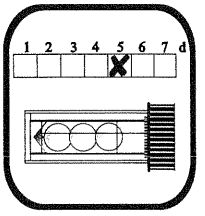
3. Fill the inner tube with sample until the level reaches the fill line.
Note: *After removing the cap from the inner tube, set it down directly on a* ***clean surface****. To avoid contamination, do not invert the cap.*



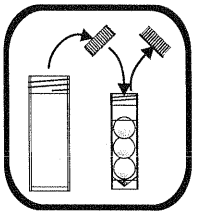
4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



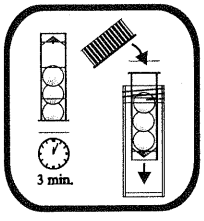
5. Label the outer tube with the date and sample origin.



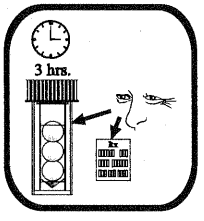
6. Place the BART tube on its side away from direct sunlight for five days at room temperature (21 to 25°C).



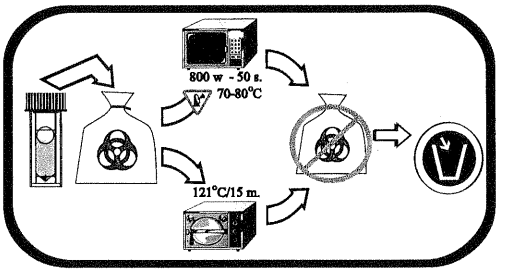
7. After five days, return the tube to a vertical position. Remove the white cap from the inner tube and replace with a Reactor Cap from the white supply tube. Screw the Reactor Cap on tightly.



8. Invert tube for three minutes to allow the reagents in the Reactor Cap to mix with the solution. Return tube to a vertical position and replace to outer tube.



9. Let tube for 3 hours. Read the reaction. Compare the observed reactions on the Reaction Comparator Chart.



10. Safely dispose using a dedicated microwave oven or by autoclave.

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Telephone: (970) 669-3050
Fax: (970) 669-2932

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c/o Dr. Bruno Lange GmbH
Willstätterstr. 11 • D-40549 Düsseldorf, Germany
Telephone: +49/[0]211.52.88.0
Fax: +49/[0]211.52.88.231

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BART™ Type: N-BART	Batch #:
Release date*:	Lot#:
Shipment date:	Expiry date:

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DBI ISO 9001:2000 Registered

For more information, visit our web-site at:
http://www.DBI.ca

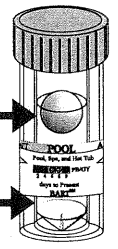
#8436

BART™ TEST FOR POOL
Pool, Spa, and Hot Tub

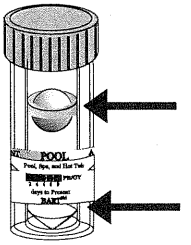
Present/Absent - observe daily for 8 days.

ABSENT
(Negative - Non-aggressive)

The solution has NO glow around ball under U.V. Light
and
NO Cloudy solution.



PRESENT
(Positive - Aggressive)



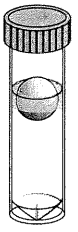
Glowing around ball under U.V. Light
and/or
Cloudy solution.

1. View test each day for 8 days.
2. Observe any growths/color changes.
3. Compare with descriptions.

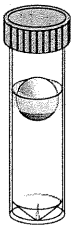
*Note: Refer to page bottom for approximate population

Advanced test information.

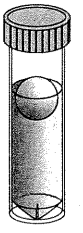
Determination of Dominant Bacteria



Pale Blue(PB)
Glowing
- *Pseudomonas aeruginosa.*



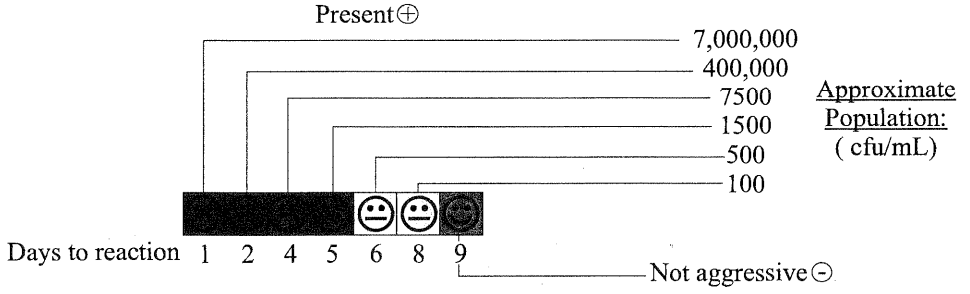
Greenish-Yellow(GY)
glowing -
Pseudomonas fluorescens.



Cloudiness(CL)
- Non-fluoresing pseudomonas.

*Note: A stamp collectors U.V. Light is adequate to view glowing.

Determination of Potential POOL Population - observe daily for reaction.



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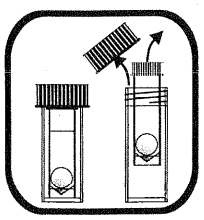
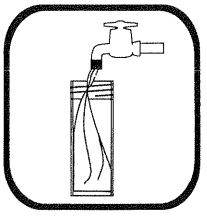
POOL-BART™

For Pools, Hot Tubs, and Spas

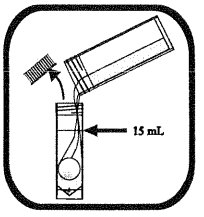
Recreational waters such as are found in swimming pools, hot tubs and beaches can often harbor a range of bacteria. These bacteria can affect the water quality and also present a hygiene risk. Water quality is normally affected by losses in clarity due to cloudiness, taste and odor problems when nuisance bacteria are aggressive in the waters. This tester has been designed to detect even low numbers of these nuisance bacteria so that suitable disinfection treatments can be applied to the water and the pumping / filtration equipment. The tester detects these bacteria through a general cloudiness occurring in the water under test. One particular species of nuisance bacteria that does present a significant hygiene risk to the bathers is *Pseudomonas aeruginosa* which causes a variety of health problems including skin infections. This species is detectable by this tester through a pale blue glow developing generally after the test has gone cloudy. The glow is most readily seen in ultra violet light. Where detection occurs, treatment of the recreational water with a suitable disinfectant is strongly recommended.. It is also recommended that follow up testing using the POOL-BART™ test be conducted to ensure that this species has been eradicated from the water.



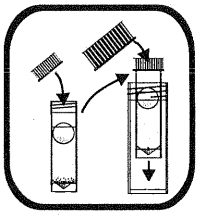
1. Remove the inner tube from the outer tube.



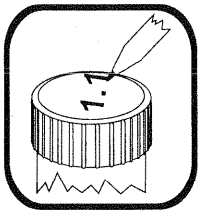
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



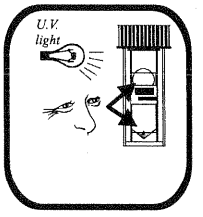
3. Fill the inner tube with sample until the level reaches the fill line.
Note: *After removing the cap from the inner tube, set it down directly on a* ***clean surface****. To avoid contamination, do not invert the cap.*



4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



5. Label the outer tube with the date and sample origin.

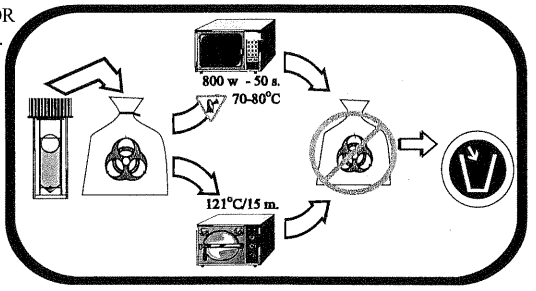


6. Place the BART tube away from direct sunlight and allow to incubate at room temperature. Check the BART daily visually for reaction and/or glowing under U.V. light.

HACH Company
P.O. Box 389
Loveland, CO 80539-0389
Telephone: (970) 669-3050
Fax: (970) 669-2932

For Technical Assistance,
Price Information and Ordering:
In the U.S.A.
Call toll-free 800-227-4224

In Europe, the Middle East, and Mediterranean Africa:
HACH Company, c/o Dr. Bruno Lange GmbH • Willstätterstr. 11 • D-40549 Düsseldorf, Germany
Telephone: +49/[0]211.52.88.0 • Fax: +49/[0]211.52.88.231



7. Safely dispose using a dedicated microwave oven or by autoclave.

Certificate of Analysis

This certificate confirms that the BART™ product listed by name, lot number, and batch number has been subjected to the full range of Quality Control procedures as outlined in "User Quality Control Manual in support of the BART Biodetection Technologies" published in 2002 by Droycon Bioconcepts Inc.

BART™ Type: POOL-BART Batch #:

Release date*: Lot#:

Shipment date: Expiry date:

* Approval for release includes the following criteria: 1. confirmation of sterility for the vials and caps, 2. approval of the medium pellet as being appropriately formed and acceptable, 3. is sterile, and 4. responds in a typical way to inoculation and incubation using selected defined microbial cultures. Details of these criteria are included in our Web Site.

This certificate confirms that the batch of the BART™ biodetectors listed have satisfactorily passed the QC screening procedures and were approved for release on the date given above

Certificate Number:

This certificate was issued by Droycon Bioconcepts Inc., 315 Dewdney Ave., Regina, SK., Canada, S4N 0E7 as an assurance that the product listed above has passed through the quality control procedures considered essential to the successful use of the testing device.

ISO 9001:2000
Registered

For more information, visit our web-site at:
http://www.DBI.ca

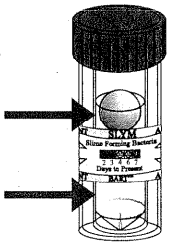
#8436

BART™ TEST FOR SLYM
SLIME FORMING BACTERIA

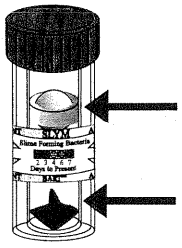
Present/Absent - observe daily for 8 days.

ABSENT
(Negative - Non-aggressive)

The solution remains clear (not cloudy) with NO slime or glowing under U.V.



PRESENT
(Positive - Aggressive)



Cloudy solution, Glowing ring around ball under U.V. Light,

and/or

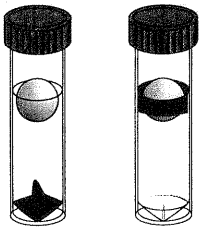
Slime growth at base of tube.

1. View test each day for 8 days.
2. Observe any growths/color changes.
3. Compare with description(s).

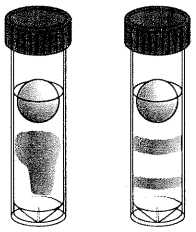
*Note: Refer to page bottom for approximate population

Advanced test information.

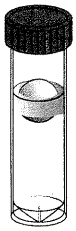
Determination of Dominant Bacteria



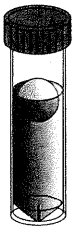
DENSE SLIME(**DS**) in base or SLIME RING(**SR**) around ball- Dense Slime Bacteria.



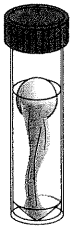
CLOUDY(**CL**) growth or LAYERED PLATES(**CP**)- Slime Forming Bacteria.



PALE BLUE GLOWING(**PB**) around ball(U.V. light) - Fluorescing Pseudomonads.

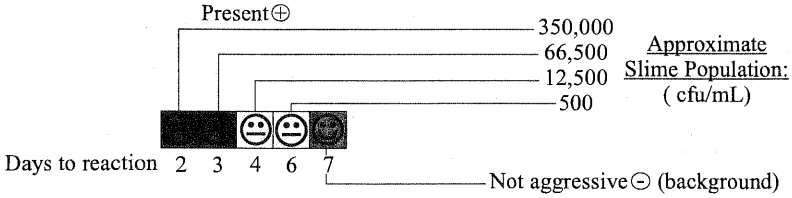


BLACKENED LIQUID(**BL**) - Pseudomonads and Enterics.



THREAD-LIKE STRANDS(**TH**) - Tight Slime Bacteria.

Determination of Potential SLYM Population - observe daily for reaction.



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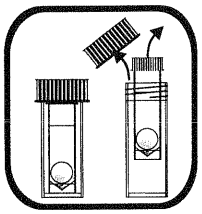
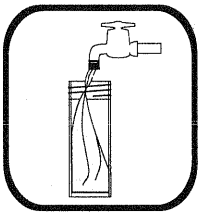
SLYM-BART™
For water and wastewater

The SLYM-BARTs can be used as a P/A test capable of indicating to some extent the possible population size and the types of slime-forming organisms present in the water sample. Slime-forming bacteria are able to produce copious amounts of slime without necessarily having to use any iron. Iron bacteria also produce slime but usually it is thinner and involves the accumulation of various forms of iron.

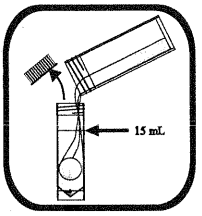
Slime-forming bacteria generally produce the thickest slime formations under aerobic (oxidative) conditions, which develop around the floating ball. Growth may be recognized as a cloudy or gel-like growth, which can be localized or occur throughout the sample. These growths are usually white, grey, yellow, or beige in color and can darken over time.



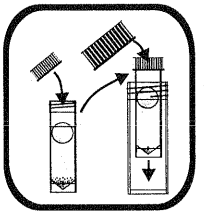
1. Remove the inner tube from the outer tube.



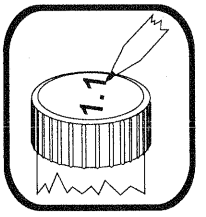
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: *Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.*



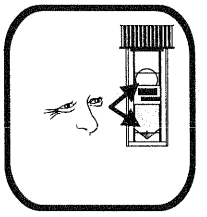
3. Fill the inner tube with sample until the level reaches the fill line.
Note: *After removing the cap from the inner tube, set it down directly on a* ***clean surface****. To avoid contamination, do not invert the cap.*



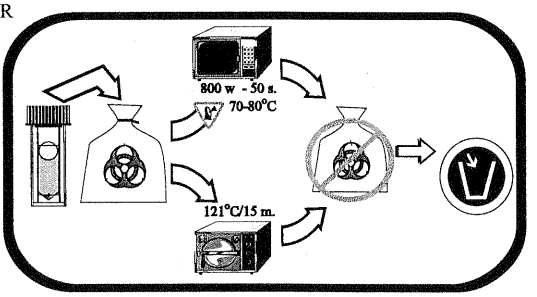
4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



5. Label the outer tube with the date and sample origin.



6. Place the BART tube away from direct sunlight and allow to incubate at room temperature. Check the BART visually for reaction daily.



7. Safely dispose using a dedicated microwave oven or by autoclave.

HACH®
HACH Company
P.O. Box 389
Loveland, CO 80539-0389
Telephone: (970) 669-3050
Fax: (970) 669-2932

For Technical Assistance,
Price Information and Ordering:
In the U.S.A.
Call toll-free 800-227-4224

In Europe, the Middle East, and Mediterranean Africa:
HACH Company, c/o Dr. Bruno Lange GmbH • Willstätterstr. 11 • D-40549 Düsseldorf, Germany
Telephone: +49/[0]211.52.88.0 • Fax: +49/[0]211.52.88.231

Certificate of Analysis

This certificate confirms that the BART™ product listed by name, lot number, and batch number has been subjected to the full range of Quality Control procedures as outlined in "User Quality Control Manual in support of the BART Biodetection Technologies" published in 2002 by Droycon Bioconcepts Inc.

BART™ Type: SLYM-BART Batch #:

Release date*: Lot#:

Shipment date: Expiry date:

* Approval for release includes the following criteria: 1. confirmation of sterility for the vials and caps, 2. approval of the medium pellet as being appropriately formed and acceptable, 3. is sterile, and 4. responds in a typical way to inoculation and incubation using selected defined microbial cultures. Details of these criteria are included in our Web Site.

This certificate confirms that the batch of the BART™ biodetectors listed have satisfactorily passed the QC screening procedures and were approved for release on the date given above

Certificate Number:

This certificate was issued by Droycon Bioconcepts Inc., 315 Dewdney Ave., Regina, SK., Canada, S4N 0E7 as an assurance that the product listed above has passed through the quality control procedures considered essential to the successful use of the testing device.

DBI ISO 9001:2000 Registered

For more information, visit our web-site at:
http://www.DBI.ca

#8436

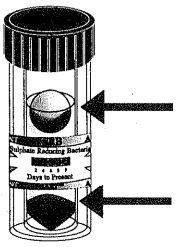
BART™ TEST FOR SRB
SULFATE REDUCING BACTERIA

Present/Absent - observe daily for 8 days.

ABSENT
(Negative - Non-aggressive)



PRESENT
(Positive - Aggressive)



1. View test each day for up to 15 days.

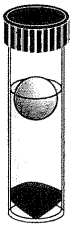
2. Observe any growths/color changes.

3. Compare with description(s).

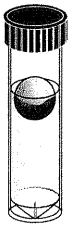
*Note: Refer to page bottom for approximate population

Advanced test information.

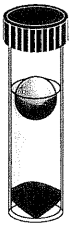
Determination of Dominant Bacteria



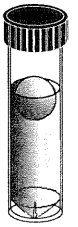
BLACK only in BASE(**BB**) - Dense anaerobic SRB consortium.



BLACK only around BALL/TOP(**BT**) - Aerobic SRB consortium.

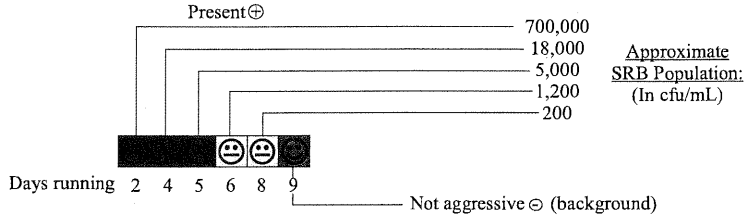


BLACK in BASE and around BALL - Combination of aerobic(**BT**) and anaerobic(**BB**) SRB.



Solution CLOUDY - Anaerobic bacteria present.

Determination of Potential SRB Population - observe daily for reaction.



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SRB-BART™ Technical Advisory

This advisory notifies users of the SRB-BART system for the detection of sulphate reducing bacteria that the standard maximum length for the monitoring of the reaction patterns is commonly ten (10) days. Operators using the SRB-BART tester for the detection of deep-seated SRB infestations in water systems associated with wells and distribution system may find it advantageous to continue observations until the fifteenth (15th) day. This is because some SRB do not exhibit reaction patterns (i.e. BT, BB or BA) until after other bacterial consortia have already grown within the tester (e.g. anaerobic bacteria). This delays the observation of a positive detection for the SRB. In water pipelines and biofouling water wells the time lags can be delayed until days 11 to 15. It is not possible to project the size of the SRB population but this extension of the testing period can be used to determine the presence / absence of the SRB when they are present in environments either in very low numbers or in a consortial association with other microbial species. It can be expected that where routine monitoring is being undertaken, sudden decreases in the time lags to 10 days or less can be taken to indicate that the SRB are becoming significantly more aggressive and may require corrective action (e.g. disinfection, pigging the lines etc).

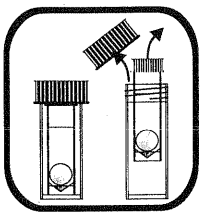
Please submit any comments and concerns to: drc@dbi.ca

SRB-BART™

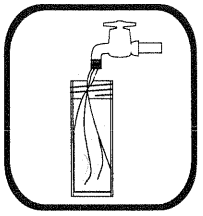
For water and wastewater

Sulfate-Reducing bacteria are a group of anaerobic bacteria that generate hydrogen sulfide (H_2S). This product can cause a number of significant problems in water. Problems range from "rotten egg" odors to the blackening of equipment, slime formations, and the initiation of corrosive processes. SRB microorganisms are difficult to detect because they are anaerobic and tend to grow deep down within biofilms (slimes) as a part of a microbial community. SRB may not be present in the free-flowing water over the site of the fouling.

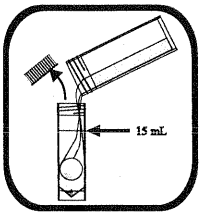
If SRB activity is present in the BART, sulfate is reduced to H_2S, which reacts with the diffusing ferrous iron to form black iron sulfide. This sulfide commonly forms either in the base (as black precipitates) and/or around the ball (as an irregular black ring).



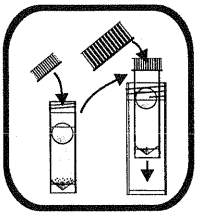
1. Remove the inner tube from the outer tube.



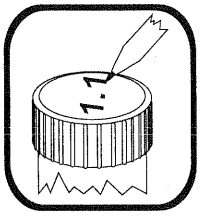
2. Using the outer tube from the BART, or a different sterile container, collect at least 20 mL of sample.
Note: Do not touch or contaminate the inside of the tube or lid. Use aseptic technique.



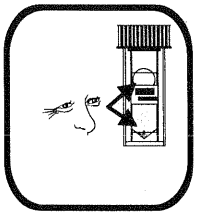
3. Fill the inner tube with sample until the level reaches the fill line.
*Note: After removing the cap from the inner tube, set it down directly on a **clean surface**. To avoid contamination, do not invert the cap.*



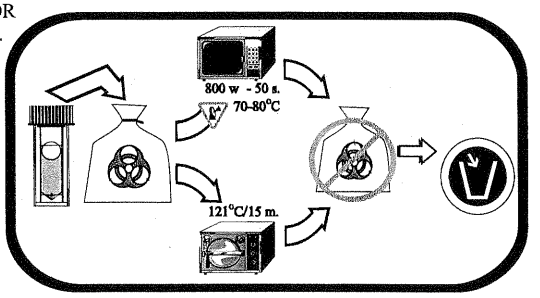
4. Tightly screw the cap back on the inner tube. Return the inner tube to the outer tube and screw the outer cap on tightly. Allow the medium to dissolve slowly, and the ball to rise at its own speed. DO NOT SHAKE OR SWIRL THE TUBE.



5. Label the outer tube with the date and sample origin.



6. Place the BART tube away from direct sunlight and allow to incubate at room temperature. Check the BART visually for reaction daily.



7. Safely dispose using a dedicated microwave oven or by autoclave.

HACH®
HACH Company
P.O. Box 389
Loveland, CO 80539-0389
Telephone: (970) 669-3050
Fax: (970) 669-2932

For Technical Assistance,
Price Information and Ordering:
In the U.S.A.
Call toll-free 800-227-4224

In Europe, the Middle East, and Mediterranean Africa:
HACH Company, c/o Dr. Bruno Lange GmbH • Willstätterstr. 11 • D-40549 Düsseldorf, Germany
Telephone: +49/[0]211.52.88.0 • Fax: +49/[0]211.52.88.231

Certificate of Analysis

This certificate confirms that the BART™ product listed by name, lot number, and batch number has been subjected to the full range of Quality Control procedures as outlined in "User Quality Control Manual in support of the BART Biodetection Technologies" published in 2002 by Droycon Bioconcepts Inc.

BART™ Type: SRB-BART — Batch #:

Release date*: — Lot#:

Shipment date: — Expiry date:

* Approval for release includes the following criteria: 1. confirmation of sterility for the vials and caps, 2. approval of the medium pellet as being appropriately formed and acceptable, 3. is sterile, and 4. responds in a typical way to inoculation and incubation using selected defined microbial cultures. Details of these criteria are included in our Web Site.

This certificate confirms that the batch of the BART™ biodetectors listed have satisfactorily passed the QC screening procedures and were approved for release on the date given above

Certificate Number:

This certificate was issued by Droycon Bioconcepts Inc., 315 Dewdney Ave., Regina, SK., Canada, S4N 0E7 as an assurance that the product listed above has passed through the quality control procedures considered essential to the successful use of the testing device.

DBI ISO 9001:2000 Registered

For more information, visit our web-site at:
http://www.DBI.ca

#8436

Appendix II-K

PERMIT DETAILS

Permit Details

(1) Permit	
PERMITTEE	SOUTHERN MINERALS INC
DEP OFFICE	OMR
PERMIT ID	O007982
ISSUE DATE	12/17/82
EXPIRATION DATE	12/17/12
FACILITY NAME	
ORIGINIAL ACRES	87.12
DISTURBED ACRES	
RECLAIMED ACRES	
CURRENT ACRES	109.25

(1)Permit Status	
ACTIVE YES/NO	Y
OPEN/CLOSED	O
STATUS	Renewed
ACTIVITY ALLOWED	Refuse Disposal - Other

(22) Permit Activities

OFFICE	ACRES ADDED	ACRES DELETED	MILESTONE	DATE	COMMENT
OMR	0	0	Renewal Letter	05/14/97	
OMR	0	0	DAM Certificate Issued	07/17/97	DAM Inspectable Unit Added-1
OMR	0	0	Revision	07/21/97	Permit Revised-3
OMR	0	0	Renewal	05/01/98	Permit Renewed-1
OMR	0	0	Emergency Warning Plan	11/10/98	EWP-06/24/1998-06/24/1999-3
OMR	0	0	Emergency Warning Plan	06/24/99	EWP-06/24/1999-06/24/2000-4
OMR	0	0	Permit Transfer	07/22/99	Transfer Ownership Only - Cannelton Industries Inc
OMR	0	0	Permit Transfer	07/22/99	Transfer Ownership Only - Cannelton Industries Inc
OMR	0	0	Permit Transfer	09/10/99	Transfer Ownership Only - Cannelton Industries Inc
OMR	18.13	0	Incidental Boundary Revision	12/15/99	Incidental Boundary Revision-4
OMR	0	0	DAM Certificate Issued	12/15/99	DAM Inspectable Unit Added-3
OMR	0	0	Renewal Letter	05/02/02	PRINTED RENEWAL

					LETTER
OMR	0	0	Permit Transfer	01/15/03	Transfer Ownership Only - Cannelton Industries Inc
OMR	0	0	Permit Transfer	02/26/03	Transfer Ownership Only - Cannelton Industries Inc
OMR	0	0	Renewal	08/12/03	Permit Renewed-2
OMR	0	0	Permit Transfer	04/30/04	Transfer Ownership Only - Cannelton Industries Inc
OMR	0	0	Operator Assignment	02/22/05	Op Asgn - Superior Processing, Inc.
OMR	0	0	Permit Transfer	03/10/05	Transfer - Southern Minerals Inc
OMR	0	0	Revision	10/25/05	Permit Revised
OMR	0	0	Revision	12/08/05	Permit Revised
OMR	0	0	Permit Transfer	10/14/08	Transfer Ownership Only - Southern Minerals Inc
OMR	0	0	Renewal	10/14/08	Permit Renewed

(1) County / Quad

County: McDowell	Quad: WELCH

(18) Inspectable Units

INSPECTABLE UNIT CODE	TYPE
001	Dam
ENTIRE	Surface Coal Mine
007	Water Outfall
009	Water Outfall
010	Water Outfall
200	Water Outfall
030	Water Outfall
001	Water Outfall
001	Water Outfall
002	Water Outfall
003	Water Outfall
004	Water Outfall
008	Water Outfall
011	Water Outfall
006	Water Outfall
005	Water Outfall
053	Water Outfall
052	Water Outfall

(1) Permit Geography

INSPECTABLE UNIT CODE:	ENTIRE	**Show Map**
MAGISTERIAL DIST:	BROWNS CREEK	
NEAREST POST OFFICE:	WELCH	
LATITUDE:	37° 25'6.0000"	
LONGITUDE:	81° 32'26.0000"	
COUNTY:	McDowell	

Click here to see Inspection Details **Click here to see Violation Details**

Permit Details

(1) Permit	
PERMITTEE	PANTHER LLC
DEP OFFICE	OMR
PERMIT ID	U039100
ISSUE DATE	03/01/79
EXPIRATION DATE	04/07/13
FACILITY NAME	Mine No. 2/Panther Preparation Plant
ORIGINIAL ACRES	9
DISTURBED ACRES	76.0700
RECLAIMED ACRES	
CURRENT ACRES	114.64

(1)Permit Status	
ACTIVE YES/NO	Y
OPEN/CLOSED	O
STATUS	Renewed

(44) Permit Activities

OFFICE	ACRES ADDED	ACRES DELETED	MILESTONE	DATE	COMMENT
OMR	0	0	Renewal Letter	09/02/97	PRINTED RENEWAL LETTER
OMR	0	0	Revision	01/16/98	Permit Revised-6
OMR	4.4	0	Incidental Boundary Revision	06/03/98	Incidental Boundary Revision-6
OMR	0	0	Revision	08/31/98	Permit Revised-7
OMR	0	0	Renewal	08/31/98	Permit Renewed-1
OMR	0	0	Revision	01/04/99	Permit Revised-8
OMR	3.6	0	Incidental Boundary Revision	01/04/99	Incidental Boundary Revision-8
OMR	0	0	Inactive Status	11/03/99	Inactive-1
OMR	0	0	Operator Assignment	05/03/00	Op Asgn - Appalachian Eagle, Inc.
OMR	1.57	0.74	Incidental Boundary Revision	07/12/00	Incidental Boundary Revision-9
OMR	1.84	0	Incidental Boundary Revision	09/22/00	Incidental Boundary Revision-10
OMR	0	0	Revision	04/11/01	Permit Revised-12
OMR	4.9	0	Incidental Boundary Revision	04/24/01	Incidental Boundary Revision-11
OMR	8.1	0	Incidental Boundary Revision	04/24/01	Incidental Boundary Revision-12

OMR	0	0	Revision	06/14/01	Permit Revised-13
OMR	0	0	Revision	07/19/01	Permit Revised-15
OMR	0	0	Revision	07/23/01	Permit Revised-9
OMR	0	0	Operator Assignment	07/26/01	Op Asgn - Speed Mining, Inc.
OMR	5.48	0	Incidental Boundary Revision	09/10/01	Incidental Boundary Revision-13
OMR	0	0	Revision	11/19/01	Permit Revised-14
OMR	0	0	Revision	01/09/02	Permit Revised-10
OMR	15.58	0	Incidental Boundary Revision	05/29/02	Incidental Boundary Revision-14
OMR	0	0	Renewal Letter	10/10/02	PRINTED RENEWAL LETTER
OMR	0.55	0	Incidental Boundary Revision	01/21/03	Incidental Boundary Revision-15
OMR	0	0	Revision	02/03/03	Permit Revised-17
OMR	4.54	0	Incidental Boundary Revision	02/11/03	Incidental Boundary Revision-16
OMR	12.64	0	Incidental Boundary Revision	04/10/03	Incidental Boundary Revision-17
OMR	0	0	Revision	05/15/03	Permit Revised-18
OMR	0	0	Revision	05/15/03	Permit Revised-19
OMR	0	0	Renewal	08/13/03	Permit Renewed-2
OMR	3	0	Incidental Boundary Revision	01/28/04	Incidental Boundary Revision-18
OMR	17.84	0	Incidental Boundary Revision	02/24/04	Incidental Boundary Revision-19
OMR	0.4	0.4	Incidental Boundary Revision	05/10/04	Incidental Boundary Revision-20
OMR	0	0	Revision	12/10/04	Permit Revised-20
OMR	0	0	Permit Transfer	01/12/05	Transfer - Panther Llc
OMR	0	0	Revision	02/17/05	Permit Revised-21
OMR	13.45	13.45	Incidental Boundary Revision	05/10/05	Incidental Boundary Revision-21
OMR	6.72	6.72	Incidental Boundary Revision	06/06/06	Incidental Boundary Revision
OMR	0	0	Activated Inactive Permit	08/01/06	Inactive Status Expired - 05/12/2002
OMR	0	0	Revision	02/01/07	Permit Revised
OMR	0	0	Renewal Letter	02/01/08	PRINTED RENEWAL LETTER
OMR	0	0	Renewal Letter	02/01/08	PRINTED RENEWAL LETTER
OMR	0	0	Renewal	07/30/08	Permit Renewed

OMR	2.1	2.1	Incidental Boundary Revision	07/30/08	Incidental Boundary Revision

(1) Variances

Permit Variance	Within 100 feet of a stream

(1) County / Quad

County: Kanawha	Quad: CEDAR GROVE

(16) Inspectable Units

INSPECTABLE UNIT CODE	TYPE
ENTIRE	Surface Coal Mine
010	Water Outfall
012	Water Outfall
014	Water Outfall
013	Water Outfall
016	Water Outfall
002	Water Outfall
001	Water Outfall
004	Water Outfall
003	Water Outfall
005	Water Outfall
007	Water Outfall
006	Water Outfall
008	Water Outfall
01	Water Outfall
009	Water Outfall

(1) Permit Geography

INSPECTABLE UNIT CODE:	ENTIRE	**Show Map**
MAGISTERIAL DIST:	CABIN CREEK	
NEAREST POST OFFICE:	DRY BRANCH	
LATITUDE:	38° 9'51.0000"	
LONGITUDE:	81° 28'5.0000"	
COUNTY:	Kanawha	

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Permit Details

(1) Permit	
PERMITTEE	LOADOUT, LLC
DEP OFFICE	OMR
PERMIT ID	O502198
ISSUE DATE	02/23/99
EXPIRATION DATE	02/23/09
FACILITY NAME	FORK CREEK PREPARATION PLANT
ORIGINIAL ACRES	74.4
DISTURBED ACRES	119.6400
RECLAIMED ACRES	
CURRENT ACRES	126.44

(1)Permit Status	
ACTIVE YES/NO	Y
OPEN/CLOSED	O
STATUS	Active
ACTIVITY ALLOWED	Preparation Plant - Other

(18) Permit Activities

OFFICE	ACRES ADDED	ACRES DELETED	MILESTONE	DATE	COMMENT
OMR	2.5	2.5	Incidental Boundary Revision	04/12/99	Incidental Boundary Revision-1
OMR	0	0	Operator Assignment	08/13/99	Op Asgn - General Construction Services, Ltd.
OMR	13.86	2.19	Incidental Boundary Revision	12/02/99	Incidental Boundary Revision-2
OMR	6.6	0	Incidental Boundary Revision	01/24/00	Incidental Boundary Revision-3
OMR	7.6	0	Incidental Boundary Revision	05/18/00	Incidental Boundary Revision-4
OMR	19.47	0	Incidental Boundary Revision	11/15/00	Incidental Boundary Revision-5
OMR	0	0	Inactive Status	08/26/02	Inactive-1
OMR	0	0	Revision	03/07/03	Permit Revised-1
OMR	0	0	Permit Transfer	03/17/03	Transfer - Loadout, Llc
OMR	0	0	Renewal Letter	08/11/03	PRINTED RENEWAL LETTER
OMR	0	0	Operator Assignment	09/30/03	Op Asgn - Coal River Processing, Llc
OMR	6.7	0	Incidental Boundary	02/24/04	Incidental Boundary

			Revision		Revision-6
OMR	0	0	Renewal	06/09/04	Permit Renewed-1
OMR	0	0	Revision	08/24/05	Permit Revised
OMR	1.56	1.56	Incidental Boundary Revision	12/19/05	Incidental Boundary Revision
OMR	0	0	Revision	01/12/06	Permit Revised
OMR	1	1	Incidental Boundary Revision	03/21/06	Incidental Boundary Revision
OMR	0	0	Activated Inactive Permit	08/01/06	Inactive Status Expired - 07/08/2003

(2) Land Uses

Premining Land Use	Fish and Wildlife Habitat/Recreation	Acres:
Postmining Land Use	Fish and Wildlife Habitat/Recreation	Acres:

(1) Variances

Permit Variance	Within 100 feet of a stream

(1) County / Quad

County: Boone	Quad: JULIAN

(12) Inspectable Units

INSPECTABLE UNIT CODE	TYPE
ENTIRE	Other
008	Water Outfall
401	Water Outfall
001	Water Outfall
002	Water Outfall
004	Water Outfall
005	Water Outfall
006	Water Outfall
003	Water Outfall
006	Water Outfall
007	Water Outfall
003	Water Outfall

(1) Permit Geography

INSPECTABLE UNIT CODE:	ENTIRE	**Show Map**
MAGISTERIAL DIST:	PEYTONA	
NEAREST POST OFFICE:	COSTA	
LATITUDE:	38° 12'38.0000"	
LONGITUDE:	81° 46'44.0000"	
COUNTY:	Boone	
USWRC WATERSHED:	Coal River	

SCS WATERSHED:	Coal River	

(1) Strata Involved	
INSPECTABLE UNIT CODE	ENTIRE
STRATA NAME	2 Gas
STRATA TYPE	Coal Seam

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Permit Details

(1) Permit	
PERMITTEE	POWER MOUNTAIN COAL COMPANY
DEP OFFICE	OMR
PERMIT ID	O000285
ISSUE DATE	01/07/85
EXPIRATION DATE	01/07/10
FACILITY NAME	HPM PREPARATION PLANT
ORIGINIAL ACRES	91
DISTURBED ACRES	129.0000
RECLAIMED ACRES	
CURRENT ACRES	162.4

(1)Permit Status	
ACTIVE YES/NO	Y
OPEN/CLOSED	O
STATUS	Renewed
ACTIVITY ALLOWED	Preparation Plant - Other

(33) Permit Activities

OFFICE	ACRES ADDED	ACRES DELETED	MILESTONE	DATE	COMMENT
OMR	0	0	Permit Transfer	02/19/98	Transfer - Power Mountain Coal Company
OMR	0	0	Revision	12/22/98	Permit Revised-7
OMR	0	0	Renewal Letter	06/01/99	PRINTED RENEWAL LETTER
OMR	0	0	Revision	09/08/99	Permit Revised-8
OMR	3.2	0	Incidental Boundary Revision	10/20/99	Incidental Boundary Revision-3
OMR	0	0	Renewal	03/07/00	Permit Renewed-1
OMR	0	0	Revision	09/22/00	Permit Revised-10
OMR	0	0	Revision	10/11/00	Permit Revised-11
OMR	1	1	Incidental Boundary Revision	01/02/01	Incidental Boundary Revision-4
OMR	0	0	Revision	05/22/01	Permit Revised-12
OMR	9.2	0	Incidental Boundary Revision	06/07/01	Incidental Boundary Revision-5
OMR	0	0	Revision	11/09/01	Permit Revised-13
			Incidental		

OMR	13.59	0	Boundary Revision	11/09/01	Incidental Boundary Revision-6
OMR	5.7	0	Incidental Boundary Revision	08/02/02	Incidental Boundary Revision-7
OMR	19.52	8.28	Incidental Boundary Revision	07/24/03	Incidental Boundary Revision-8
OMR	0	0	Revision	08/01/03	Permit Revised-15
OMR	26.03	2.46	Incidental Boundary Revision	10/31/03	Incidental Boundary Revision
OMR	2.77	2.77	Incidental Boundary Revision	11/04/03	Incidental Boundary Revision-11
OMR	0	0	Revision	12/16/03	Permit Revised-17
OMR	0	0	Renewal Letter	07/12/04	PRINTED RENEWAL LETTER
OMR	4.8	4.8	Incidental Boundary Revision	01/25/05	Incidental Boundary Revision-12
OMR	0	0	Renewal	04/18/05	Permit Renewed-2
OMR	0	0	Show Cause MR-10	10/19/05	
OMR	0	0	Show Cause 30-Day	10/31/05	SC #1224
OMR	0	0	Revision	11/03/05	Permit Revised
OMR	0	0	Revision	01/18/06	Permit Revised
OMR	26.03	2.46	Incidental Boundary Revision	01/24/06	Incidental Boundary Revision - issued previously on 10/31/03
OMR	0	0	Revision	04/12/06	Permit Revised
OMR	0	0	Revision	04/19/06	Permit Revised
OMR	0	0	Show Cause Terminated	02/09/07	SC #1224
OMR	4.96	4.96	Incidental Boundary Revision	02/20/07	Incidental Boundary Revision
OMR	2.8	2.8	Incidental Boundary Revision	08/22/07	Incidental Boundary Revision
OMR	3.02	3.02	Incidental Boundary Revision	07/25/08	Incidental Boundary Revision

(1) County / Quad

County: Nicholas	Quad: LOCKWOOD

(11) Inspectable Units

INSPECTABLE UNIT CODE	TYPE
ENTIRE	Surface Coal Mine
401	Water Outfall
002	Water Outfall
004	Water Outfall
006	Water Outfall
007	Water Outfall
DRF-1	Water Outfall
DTC-1	Water Outfall
URF-1	Water Outfall
UTC-1	Water Outfall
005	Water Outfall

(2) Permit Geography

INSPECTABLE UNIT CODE:	002	**Show Map**
MAGISTERIAL DIST:	GRANTJEFFERSON	
NEAREST POST OFFICE:	DRENNEN	
LATITUDE:	° ' "	
LONGITUDE:	° ' "	
COUNTY:	Nicholas	
INSPECTABLE UNIT CODE:	ENTIRE	**Show Map**
MAGISTERIAL DIST:	GRANT/JEFFERSON	
NEAREST POST OFFICE:	DRENNEN	
LATITUDE:	38° 18'12.0000"	
LONGITUDE:	81° 0'2.0000"	
COUNTY:	Nicholas	

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Permit Details

(1) Permit	
PERMITTEE	MARFORK COAL COMPANY INC
DEP OFFICE	OMR
PERMIT ID	O301095
ISSUE DATE	11/28/95
EXPIRATION DATE	11/28/10
FACILITY NAME	BRUSHY FORK SLURRY IMPOUNDMENT
ORIGINIAL ACRES	270
DISTURBED ACRES	633.1500
RECLAIMED ACRES	
CURRENT ACRES	645

(1)Permit Status	
ACTIVE YES/NO	Y
OPEN/CLOSED	O
STATUS	Renewed
ACTIVITY ALLOWED	Impoundments (Dams) - Other
ACTIVITY ALLOWED	Tipple - Other

(52) Permit Activities

OFFICE	ACRES ADDED	ACRES DELETED	MILESTONE	DATE	COMMENT
OMR	11.85	0	Incidental Boundary Revision	08/21/97	Incidental Boundary Revision-3
OMR	0	0	Revision	10/09/97	Permit Revised-3
OMR	0	0	Operator Assignment	10/30/97	Op Asgn - Bundy Auger Mining Inc
OMR	0	0	Operator Assignment	10/30/97	Op Asgn - E & D Mountain View, Inc
OMR	0	0	Revision	01/22/98	Permit Revised-4
OMR	0	0	Emergency Warning Plan	03/09/98	EWP---2
OMR	0	0	Revision	08/21/98	Permit Revised-7
OMR	0	0	Revision	10/20/98	Permit Revised-8
OMR	0	0	Emergency Warning Plan	02/19/99	EWP---3
OMR	82.44	0	Incidental Boundary Revision	07/29/99	Incidental Boundary Revision-5
OMR	0	0	Operator Assignment	07/30/99	Op Asgn - Independence Coal Company Inc Dba

					Progre
OMR	0	0	Revision	08/23/99	Permit Revised-9
OMR	272.44	0	Incidental Boundary Revision	12/22/99	Incidental Boundary Revision-6
OMR	0	0	DAM Certificate Issued	01/19/00	DAM Inspectable Unit Added-1
OMR	0	0	DAM Certificate Issued	01/19/00	DAM Inspectable Unit Added
OMR	0	0	Renewal Letter	05/01/00	PRINTED RENEWAL LETTER
OMR	0	0	Revision	05/11/00	Permit Revised-11
OMR	0	0	Revision	05/11/00	Permit Revised-10
OMR	0	0	Emergency Warning Plan	06/22/00	EWP---4
OMR	0	0	Revision	10/26/00	Permit Revised-12
OMR	0	0	Renewal	01/26/01	Permit Renewed-1
OMR	0	0	Revision	03/12/01	Permit Revised-13
OMR	0	0	Emergency Warning Plan	03/23/01	EWP---5
OMR	0	0	Revision	04/13/01	Permit Revised-15
OMR	0	0	Revision	05/04/01	Permit Revised-14
OMR	0	0	Show Cause MR-10	05/25/01	
OMR	0	0	Show Cause 30-Day	06/07/01	SC #1044
OMR	0	0	Show Cause 30-Day	06/07/01	
OMR	0	0	Show Cause Hearing	08/27/01	Hearing re-scheduled to 10-25-01 @ 10:00; SC #1044
OMR	0	0	Revision	10/03/01	Permit Revised-16
OMR	0	0	Emergency Warning Plan	03/14/02	EWP-03/23/2002-03/23/2003-6
OMR	0	0	Revision	04/16/02	Permit Revised-18
OMR	0	0	Revision	07/19/02	Permit Revised-17
OMR	0	0	Emergency Warning Plan	10/18/02	EWP---7
OMR	0	0	DAM Certificate Issued	10/30/02	DAM Inspectable Unit Added-2
OMR	0	0	DAM Certificate Issued	05/12/03	DAM Inspectable Unit Added-3
OMR	0	0	Revision	05/12/03	Permit Revised-20
OMR	5.57	5.57	Incidental Boundary Revision	10/09/03	Incidental Boundary Revision-7

OMR	0	0	Emergency Warning Plan	03/12/04	EWP-10/18/2003-10/18/2004-8
OMR	0	0	Revision	07/28/04	Permit Revised-21
OMR	0	0	Emergency Warning Plan	11/19/04	EWP-10/18/2004-10/18/2005-9
OMR	0	0	Renewal Letter	05/31/05	PRINTED RENEWAL LETTER
OMR	0	0	Emergency Warning Plan	10/24/05	EWP-10/18/2005-10/18/2006
OMR	0	0	Renewal	02/07/06	Permit Renewed
OMR	0	0	Revision	05/23/06	Permit Revised
OMR	0	0	Emergency Warning Plan	10/23/06	EWP-10/18/2006-10/18/2007
OMR	0	0	Show Cause Terminated	02/15/07	SC #1044
OMR	0	0	Revision	09/10/07	Permit Revised
OMR	0	0	Emergency Warning Plan	09/11/07	EWP-10/18/2007-10/18/2008
OMR	0	0	Revision	08/15/08	Permit Revised
OMR	0	0	Emergency Warning Plan	09/26/08	EWP-10/18/2008-10/18/2009
OMR	0	0	Revision	10/01/08	Permit Revised

(1) County / Quad

County: Raleigh	Quad: DOROTHY

(4) Inspectable Units

INSPECTABLE UNIT CODE	TYPE
001	Dam
ENTIRE	Surface Coal Mine
2	Water Outfall
001	Water Outfall

(1) Permit Geography

INSPECTABLE UNIT CODE:	ENTIRE	**Show Map**
MAGISTERIAL DIST:	MARSH FORK	
NEAREST POST OFFICE:	DOROTHY	
LATITUDE:	37° 55'8.0000"	
LONGITUDE:	81° 29'10.0000"	
COUNTY:	Raleigh	

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Permit Details

(1) Permit	
PERMITTEE	CORESCO LLC
DEP OFFICE	OMR
PERMIT ID	O101297
ISSUE DATE	10/13/00
EXPIRATION DATE	10/13/10
FACILITY NAME	CRAFTS RUN REFUSE DISPOSAL
ORIGINIAL ACRES	250
DISTURBED ACRES	
RECLAIMED ACRES	
CURRENT ACRES	250

(1)Permit Status	
ACTIVE YES/NO	N
OPEN/CLOSED	O
STATUS	Renewed
ACTIVITY ALLOWED	Refuse Disposal - Other

(5) Permit Activities

OFFICE	ACRES ADDED	ACRES DELETED	MILESTONE	DATE	COMMENT
OMR	0	0	Permit Transfer	09/28/01	Transfer - Coresco, Inc.
OMR	0	0	Renewal Letter	04/08/05	PRINTED RENEWAL LETTER
OMR	0	0	Renewal	11/09/05	Permit Renewed
OMR	0	0	Revision	10/15/07	Permit Revised
OMR	0	0	Permit Transfer	08/01/08	Transfer - Coresco Llc

(4) Land Uses

Premining Land Use	Hayland or Pasture	Acres:
Premining Land Use	Forestland	Acres:
Premining Land Use	Previously Mined and Not Reclaimed	Acres:
Postmining Land Use	Industrial / Commercial	Acres:

(6) Variances

Permit Variance	In-stream drainage control
Permit Variance	Permanent Impoundments
Permit Variance	Permanent Roads
Permit Variance	Post mining land use change

Permit Variance	Results of Test Borings
Permit Variance	Within 100 feet of a stream

(1) County / Quad

County: Monongalia	Quad: MORGANTOWN NORTH

(1) Inspectable Units

INSPECTABLE UNIT CODE	TYPE
ENTIRE	Refuse Facility

(1) Permit Geography

INSPECTABLE UNIT CODE:	ENTIRE	**Show Map**
MAGISTERIAL DIST:	CASS	
NEAREST POST OFFICE:	MAIDSVILLE	
LATITUDE:	39° 42'22.0000"	
LONGITUDE:	79° 59'19.0000"	
COUNTY:	Monongalia	
USWRC WATERSHED:	Monongahela River	
SCS WATERSHED:	Monongahela River Direct Drains - 090	

(2) Strata Involved

INSPECTABLE UNIT CODE	ENTIRE
STRATA NAME	Redstone
STRATA TYPE	Coal Seam
INSPECTABLE UNIT CODE	ENTIRE
STRATA NAME	Sewickley
STRATA TYPE	Coal Seam

Click here to see Inspection Details **Click here to see Violation Details**

Appendix II-L

PERMIT REVIEW FORM

Slurry Injection Investigation Review Form
2007

Company: _____ **SCMRA Permit No.:** _____

UIC Permit No.: _____ **NPDES Permit No.:** _____

County: _____ **Coordinates:** _____

Permit Approval Dates: _____

Permit Conditions: _____

Watershed: _____ **Quad:** _____

Stream(s) (2 miles) _____

_____

Baseline Data - Up Stream and Down Stream: _____

_____

PHC Findings: _____

_____

_____

_____

_____

_____

_____

CHIA Findings: _____

_____

Surface and Underground Monitoring Plan: _____

Approved Discharge Rates: _____

History of all Violations for this Permit: _____

History of all Citizen Complaints for this Permit: _____

Status: Active _____ Inactive _____ Abandoned _____

Public Water Intake (½ mile): _____

Water Wells (½ mile): _____

_____

Aquifers in Use: _____

_____

On-site Preparation Plant: Yes _____ **No** _____

Initial Permit Date: _____

System Capacity (gpm): _____

Types of Chemicals/Reagents Used: _____

_____

Material Safety Data Sheets (MSDS) for Each: _____

_____

_____

Coal Processed (Seam): _____

_____

Chemical Characteristics of Coal: _____

_____

Coal Refuse Disposal Rate: _____

Coal Surry Disposal Rate: _____

Discharge Monitoring Results: _____

_____

_____

On-site Coal Refuse Disposal: Yes _____ No _____

Current Size (acres/cubic yards): _____

Projected Size (acres/cubic yards): _____

Chemical Characteristics of Coal Refuse: _____

_____

Discharge Monitoring Results: _____

_____

_____

On-site Coal Slurry Impoundment: Yes _____No _____

Current Capacity (acre feet): _____

Projected Capacity (acre feet): _____

Chemical Characteristics of Slurry: _____

_____

Discharge Monitoring Results: _____

_____

_____

No. of Slurry Injection Wells: _____

Active: _____ Sealed: _____

Initially Permitted: _____

Location of Each Well: _____

_____

_____

Chemical Characteristic of Injectate: _____

_____

Treatment of Injectate: Yes _____ **No** _____

Rate of Injection: _____

Life of Operation (volume) _____

Name of Underground Mine Receiving Injectate: _____

Location: _____

Year Abandoned: _____

Areal Extent of Underground Workings (acres): _____

Elevation of Abandoned Mine: _____

Above Drainage _____ **Below Drainage** _____

Chemical Characteristics of Remaining Coal: _____

_____

Elevation of Mine Pool: _____

Chemical Characteristics of Mine Pool Water: _____

_____

Abandoned Mine Workings Above or Below Receiving Mine: _____

Discharge Monitoring Results: _____

Surface Drainage System(s): _____

Number of Surface and Ground Water Monitoring Sites: _____

Monitoring Site Location(s): _____

Surface Water Samples: _____

Ground Water Samples: _____

Comments: _____

_____

_____

_____

Appendix II-M

PERMIT REVIEWS

Slurry Injection Investigation Review Form
2007

Company: LoadOut (Fork Creek) **SCMRA Permit No.:** O-5021-98

UIC Permit No.: 029200005 **NPDES Permit No.:** WV1020005

MSHA Permit No. 46-08752 **Acres:** 126.4

County: Boone **Coordinates:** Latitude 38 12' 38" Longitude 81 46' 44"

Permit Approval Dates: February 23, 1999, November 13, 2000,

Permit Conditions: None

Watershed: Coal River **Quad:** Julian

Stream(s) (2 miles) River Fork of Fork Creek, Fork Creek of Big Coal River, and Big Coal River

Baseline Data - Up Stream and Down Stream: See attachment J-3, J-4 and J-6, 9 surface and 6 ground water stations

PHC Findings: See attachment J-6

CHIA Findings: See attachment

Surface and Underground Monitoring Plan:

Approved Discharge Rates:

History of all Violations for this Permit: Slip on hill behind plant 5/03, Slurry Spill 8/04, Blackwater 9/05, Muddy water Fork Creek 11/05, Offsite Disturbance 3/06, Spill 1/06, Effluent Limit Violations 10/06, 12/06, 3/07, 4/07, Spill 2/07, Floc Spill 4/07 (150 gallons)

History of all Citizen Complaints for this Permit: Effluent limit violation 8/04, Blackwater 9/05, Nellis artesian near Brush Creek – AML to investigate 6/06 (See DMR and AML Reports)

Status: Active X **Inactive** _____ **Abandoned** _____

Public Water Intake (½ mile): None

Water Wells (½ mile): See attachment J-2

Aquifers in Use: Yes

On-site Preparation Plant: **Yes** X **No** ____

Initial Permit Date: 2/23/1999

System Capacity (gpm): ____

Types of Chemicals/Reagents Used: Anionic Flocculant and Cationic Flocculant

Material Safety Data Sheets (MSDS) for Each: See Attached

Coal Processed (Seam): #2Gas

Chemical Characteristics of Coal: Average - .393% Sulfur, neutralization potential 3.02, Maximum Acid Potential 12.45

Coal Refuse Disposal Rate: ____

Coal Surry Disposal Rate: ____

Discharge Monitoring Results: ____

On-site Coal Refuse Disposal: Yes _____ **No** ___X_____

Current Size (acres/cubic yards): _____

Projected Size (acres/cubic yards): _____

Chemical Characteristics of Coal Refuse: _____

_____

Discharge Monitoring Results: _____

_____

_____

On-site Coal Slurry Impoundment: Yes ___X___ **No** _____ (Slurry Cells -5/06 O-5013-99)

Current Capacity (acre feet): _____

Projected Capacity (acre feet): _____

Chemical Characteristics of Slurry: __88% ash/rock, 1.1% Sulfur, 10.8%, 10.8%

coal fines, .06% Floc Anionic, .06% Floc-Cationic_____

_____

Discharge Monitoring Results: _____

_____

_____

No. of Slurry Injection Wells: _____17_____

Active: _____ **Sealed:** _____

Initially Permitted: _____11/00_____

Location of Each Well: See attachment, Slurry pumped to Cherry Tree, O-5018-00

Chemical Characteristic of Injectate: Coal fines 2.7%, Ash 22%, Sulfur .3%, Water 75% Cationic Floc .01%, Anionic Floc .01%

Treatment of Injectate: Yes _____ **No** _____

Rate of Injection: 484 million gallons per year; 1200 gallons per minute

Life of Operation (volume) _____

Name of Underground Mine Receiving Injectate: Armco Nellis No. 2 Gas Mine; Stopped injecting 5/06

Location: _____

Year Abandoned: 1950s AML - 1935

Areal Extent of Underground Workings (acres): _____

Elevation of Abandoned Mine: _____

Above Drainage _____ **Below Drainage** _____

Chemical Characteristics of Remaining Coal: No. 2 Gas AML – Eagle

Elevation of Mine Pool: 770 Feet AML – 790 Feet

Chemical Characteristics of Mine Pool Water:

Abandoned Mine Workings Above or Below Receiving Mine:

Discharge Monitoring Results:

Surface Drainage System(s): See permit

Number of Surface and Ground Water Monitoring Sites:

Monitoring Site Location(s): See Attachment U1 and U2

Surface Water Samples:

Ground Water Samples: _____

Comments: _____

Slurry Injection Investigation Review Form
2007

Company: Panther LLC/PG&H/Cox Farm **SCMRA Permit No.:** UO-391, Mine 2

UIC Permit No.: 030800039 **NPDES Permit No.:** WV0048101

MSHA Permit No. 46-05437 **Acres:** 114.64

County: Kanawha **Coordinates:** Latitude 38 06' 36" Longitude 81 31' 18"

Permit Approval Dates: March 1, 1979

Permit Conditions: Workers' Compensation

Watershed: Kanawha **Quad:** Cedar Grove, Sylvester

Stream(s) (2 miles) Wet Branch, Slaughter Creek, Long Bottom Creek, Laurel Fork, Joes Creek, Left Fork of Coal Creek, and Cabin Creek

Baseline Data - Up Stream and Down Stream: See above

PHC Findings: See attached IBRs 3, 5, 17, 19, 21 and Revisions 1, 5, 7, 9, 12, 13, 14, 18, 20, 21

CHIA Findings: See attached IBRs 5, 17, 19, 21; Renewal 2003; and Revisions 9, 12, 20

Surface and Underground Monitoring Plan: See attached Permit; IBRs 6, 19, 21; and Revision 7

Approved Discharge Rates:

History of all Violations for this Permit: Backfilling 1991, 1993; water monitoring 1991, 1994; drainage control 1990, 1998, 2002, 2005, 2004, 2007; slides 1998, 2002; exceeds limits 1995, 1996, 1997, 1998, 2004, 2005; effluent limitations 1994, 1997, 1998, 2002, 2003, 2006; Track 1993, 1998, 1999; Groundwater 1994; Contaminated Soil 2004 (fuel/oil spill)

History of all Citizen Complaints for this Permit: Blackwater 2003; creek cloudy 1998; blasting 2000; drainage control 2003

Status: Active X **Inactive** _____ **Abandoned** _____

Public Water Intake (½ mile): None

Water Wells (½ mile): Bailey; Estep; Cooper; Mt. Herman Church; Adkins

Aquifers in Use: Yes

On-site Preparation Plant: **Yes** X **No** (No 1 Prep Plant)

Initial Permit Date: 1979

System Capacity (gpm):

Types of Chemicals/Reagents Used: Nalco 8855 Coagulant, Nalco 9843 Flotation Reagent, Nalco 9850 Cationic, Optimer 9880 PULV Flocculant and 9850 Cationic Flocculant

Material Safety Data Sheets (MSDS) for Each: Nalco 8855 Coagulant, Nalco 9843 Flotation Reagent, Nalco 9850 Cationic, Optimer 9880 PULV Flocculant and Nalco 9850 Cationic Flocculant

Coal Processed (Seam): No. 2 Gas, Peerless, Upper Eagle

Chemical Characteristics of Coal:

Coal Refuse Disposal Rate: _____

Coal Surry Disposal Rate: _____

Discharge Monitoring Results: _____

_____

_____

On-site Coal Refuse Disposal: Yes _____ **No** ___X___ (O-2-82)

Current Size (acres/cubic yards): _____Slurry Cells_____

Projected Size (acres/cubic yards): _____

Chemical Characteristics of Coal Refuse: _____No. 2 Gas, Eagle_____

_____

Discharge Monitoring Results: _____

_____

_____

On-site Coal Slurry Impoundment: Yes _____ **No** ___X___ (O-112-83)
Current Capacity (acre feet): _____

Projected Capacity (acre feet): _____

Chemical Characteristics of Slurry: _____

_____

Discharge Monitoring Results: _____

_____

_____

No. of Slurry Injection Wells: 3, 27

Active: _____ **Sealed:** _____

Initially Permitted: 12/2000, 4/2001, 4/2002, 2003

Location of Each Well: O-2-82

Chemical Characteristic of Injectate: No. 2 Gas, Eagle

Treatment of Injectate: Yes _____ **No** X

Rate of Injection: _____

Life of Operation (volume) _____

Name of Underground Mine Receiving Injectate: PG&H Mine 2 (Abandoned)

Location: Maps, Revision 11

Year Abandoned: _____

Areal Extent of Underground Workings (acres): _____

Elevation of Abandoned Mine: 670 - 680'

Above Drainage _____ **Below Drainage** Yes

Chemical Characteristics of Remaining Coal: No. 2 Gas

Elevation of Mine Pool: 670' - 695'

Chemical Characteristics of Mine Pool Water: _____

Abandoned Mine Workings Above or Below Receiving Mine: _____

UO-84, UO-351, and UO-172 are 540', 460' and 176' respectively above UO 391

Discharge Monitoring Results: _____

Surface Drainage System(s): _____

Number of Surface and Ground Water Monitoring Sites: _____

Monitoring Site Location(s): Site 2 and 2 wells

Surface Water Samples: Sample Site 2 pH, flow, ss, Fe

Ground Water Samples: Bailey and Estep wells

Comments: _____

Slurry Injection Investigation Review Form
2008

Company: Power Mountain/Bethlehem Mines **SCMRA Permit No.:** O-2-85

UIC Permit No.: 019999067 **NPDES Permit No.:** WV0090603

MSHA Permit No. 46-06880 **Acres:** 162.4

County: Nicholas **Coordinates:** Latitude 38 18' 12" Longitude 81 00' 02"

Permit Approval Dates: January 7, 1985

Permit Conditions: AOC Variance, Mountaintop Removal, Preparation Plant

Watershed: Gauley River **Quad:** Lockwood

Stream(s) (2 miles) Road Fork, Sugar Camp Branch, Twentymile Creek, Robinson Fork, Line Creek, Jones Branch, Spruce Run, and Jerry Fork

Baseline Data - Up Stream and Down Stream: PHC, IBR-5, 10, and 12, Robinson Fork, Twntymile 3 stations, 1 groundwater station, GW1

PHC Findings: See F3, Groundwater Monitoring Sites 2, 4 and 100. Spring 2 - same aquifer. Surface water monitoring Sites 1, 1A, 8, 20, 17,18, 24, 16, 15, 14, 10 and 9. Water near neutral buffering capacity. Monitoring at GW-2 to continue throughout operation of the plant. No surface or groundwater is being used for private or public use

CHIA Findings: See attachment

Surface and Underground Monitoring Plan: _____

Approved Discharge Rates: _____

History of all Violations for this Permit: Slurry (30 gpm) seeping into Line Creek at three different locations (1/03); blasting 1/05, 3/05,12/85; Drainage 12/85, 9/89, 9/90, 11/90, 2/91, 4/91, 10/93, 1/94, 7/99, 10,99, 4/00, 4/03, 9/04, 1/05; effluent violations 10/85, 4/99, 10/99, 12/00, 2/02, 6/03; haulroad 4/00, 2/02; backfilling 2/02.

History of all Citizen Complaints for this Permit: ___Slurry spill, Jones Branch Dam, Blackwater spill

Status: Active ___X___ **Inactive** _____ **Abandoned** _____

Public Water Intake (½ mile): _____None_____

Water Wells (½ mile):_____None_____

Aquifers in Use: None

On-site Preparation Plant: **Yes** X **No** _____

Initial Permit Date: 1/7/1985

System Capacity (gpm): _____

Types of Chemicals/Reagents Used: Freedom Industries Harz-3 (Acid Reducer); Sloutions Industry Accoal 9628 Promoter (Frother), Freedom Enviro Flocculant CF-1 (Floc); Floerger EM553 (Flocculant)

Material Safety Data Sheets (MSDS) for Each: See Attachment

Coal Processed (Seam): Eagle, Coalburg, Stockton, 5 Block

Chemical Characteristics of Coal: See acid based accounts of coal seams 1

Coal Refuse Disposal Rate: _____

Coal Surry Disposal Rate: _____

Discharge Monitoring Results: _____

O-3014-99

On-site Coal Refuse Disposal: Yes _____ **No** X Sugar Camp Branch

Current Size (acres/cubic yards): _____

Projected Size (acres/cubic yards): _____

Chemical Characteristics of Coal Refuse: 1% alkaline amendment

_____

Discharge Monitoring Results: _____

_____

_____

On-site Coal Slurry Impoundment: Yes ____ **No** X (O-3014-99)
Sugar Camp Branch

Current Capacity (acre feet): _____

Projected Capacity (acre feet): _____

Chemical Characteristics of Slurry: _____

_____

Discharge Monitoring Results: _____

_____

_____

No. of Slurry Injection Wells: 49

Active: X **Sealed:** _____

Initially Permitted: 7/2000, 9/2007

Location of Each Well: See attachment, Hutchinson Mine (Terry Eagle) four injection

Wells - TEA, TEB, TEC, and TED. Flying Eagle - FEA, FEB, FEC, and FED. Earlier injection wells at Rhonda Eagle REA, REB, REC, RED, REE; William Eagle WEA, WEB, WEC, WED, and WEE; Bethlehem Mine 81 201-215; and Sugar Camp Winifrede Mine 201, 202, 203.

Chemical Characteristic of Injectate: _____

_____

Treatment of Injectate: Yes _____ **No** ___X_____

Rate of Injection: _____55,000 GPD, 1800 gallons per minute____

Life of Operation (volume) _____

Name of Underground Mine Receiving Injectate: _____Flying Eagle; Bethlehem Mine81; Hutchinson/Terry Eagle; Rhonda Eagle; William Eagle; Sugar Camp Winifrede Mine.

Location: _____

Year Abandoned: _____Hutchinson 1998, Mine 81 December 1991, Rhonda Eagle 1970

Areal Extent of Underground Workings (acres): __63% of mine workings. Mine dewatered (Hutchinson)_____

Elevation of Abandoned Mine: ___Void 4-6 feet_____

Above Drainage _____ **Below Drainage** _____X_____

Chemical Characteristics of Remaining Coal: Eagle Seam pH 8.4, Alkalinity 147, Acidity 10, Conductivity 515, Iron .03

Elevation of Mine Pool: Hutchinson 1140'; Flying Eagle 1355'; Mine 81 1190'; Rhonda Eagle 1325'; William Eagle 1435'; Sugar Camp Winifrede Mine 1870'

Chemical Characteristics of Mine Pool Water: 1/04 pH 9.19, Total Sulfates 32.96, Dissolved Iron .05, Dissolve Al .09, Total Dissolved Solids 354, Total Chromium .0152, Dissolved Copper .0025, Dissolved Zinc .0062

Abandoned Mine Workings Above or Below Receiving Mine:

Discharge Monitoring Results:

Surface Drainage System(s):

Number of Surface and Ground Water Monitoring Sites: See F-4, No map

Monitoring Site Location(s): GW-2, DSC-1, DTM-1, MW 16, Twentymile Church GW-1, DTC-1 (Instream),TEA Slurry Injection, TE MW1, TE MW2, TE MW3, TE DH1, Dewatering, USTC1 and DSTC1. FE MW1, FE MW2, FE MW3, FE MW4, and FE DH1. WE MW3-A WE MW2, and WE MW1. RE MW1, RE MW2 and RE MW3. Bethlehem MW1, MW2, MW3, MW5, MW6, MW8, MW13, MW14, MW15, MW16, MW17, MW18, MW20 and MW21. SCWMW4 and SCW DH1.

Surface Water Samples: See attachments

Ground Water Samples: No groundwater systems are to be affected. GW-2 will be monitored concurrent with surface water monitoring. CHIA- No groundwater user within 4.5 miles. No significant perched aquifers. Water sample for GW1- See attachment.

Comments:

Slurry Injection Investigation Review Form
2007

Company: Southern Minerals Inc. (Cannelton) **SCMRA Permit No.:** O-79-82

UIC Permit No.: O444-02-047 **NPDES Permit No.:** WV0048437

MSHA Permit No. 46-03303 **Acres:** 109.25

County: McDowell **Coordinates:** Latitude 37 25' 6" Longitude 81 32' 26"

Permit Approval Dates: December 17, 1982, January 26, 2007,

Permit Conditions: None Initially; Payment of Workers' Compensation

Watershed: Elkhorn Creek of Tug Fork River **Quad:** Welch

Stream(s) (2 miles) Elkhorn Creek

Baseline Data - Up Stream and Down Stream: 50' Upstream confluence of Pond 11; 50' Downstream confluence of Pond 4

PHC Findings: See Attachment

CHIA Findings:

Surface and Underground Monitoring Plan:

Approved Discharge Rates:

History of all Violations for this Permit: Slurry injection point plugged spilled into Elkhorn - 1/88; Thickener overflowed into stream - 11/92; Slurry spill - 7/93; Blackwater 9/93; Failed to keep reclamation current 6/96; Failed to maintain Ponds- 7/00.

History of all Citizen Complaints for this Permit: Haulroad Dust Complaints – Numerous

Status: Active X **Inactive** _____ **Abandoned** _____

Public Water Intake (½ mile): Welch PSD

Water Wells (½ mile): None

Aquifers in Use:

On-site Preparation Plant: **Yes** X **No**

Initial Permit Date: December 17, 1982

System Capacity (gpm): 800

Types of Chemicals/Reagents Used: Nalco O1DU113 – Collector, Nalco DVS4U18 – Collector, Nalco Nalflote 9747 - Reagent, and Nalco Optimer 8873 - Flocculant

Material Safety Data Sheets (MSDS) for Each: Yes - See attached

Hazardous Chemicals – Mixed C3-24 Alcohols, Aldehydes and Esters and 2-Ethylhexanol Chemicals only identified for 2-Ethylhexanol

Coal Processed (Seam): Pocahontas 3 and 4 seams

Chemical Characteristics of Coal:

Coal Refuse Disposal Rate:

Coal Surry Disposal Rate:

Discharge Monitoring Results:

On-site Coal Refuse Disposal: Yes X **No** _____

Current Size (acres/cubic yards): _____

Projected Size (acres/cubic yards): 8.4 million tons

Chemical Characteristics of Coal Refuse: _____

Discharge Monitoring Results: _____

On-site Coal Slurry Impoundment: Yes X **No** ___ (Elkhorn Dam)

Current Capacity (acre feet): 234

Projected Capacity (acre feet): 434 -Total Storage

Chemical Characteristics of Slurry: _____

Discharge Monitoring Results: _____

No. of Slurry Injection Wells: 5

Active: 5 (1) **Sealed:** (3)

Initially Permitted: January 26, 2007

Location of Each Well: _____

Chemical Characteristic of Injectate: Nalco O1DU113 – Collector , Nalco DVS4U018 – Collector, Nalco Nalflote 9747 - Reagent, and Nalco Optimer 8873 – Flocculant

Treatment of Injectate: Yes _____ **No** _____

Rate of Injection: _____

Life of Operation (volume) _____

Name of Underground Mine Receiving Injectate: Pocahontas No. 3 Mine

Location: _____

Year Abandoned: _____

Areal Extent of Underground Workings (acres): _____

Elevation of Abandoned Mine: 1252 West Side and 1307 East Side

Above Drainage _____ **Below Drainage** X

Chemical Characteristics of Remaining Coal: _____

Elevation of Mine Pool: 1346

Chemical Characteristics of Mine Pool Water: _____

Abandoned Mine Workings Above or Below Receiving Mine: Pocahontas No. 4 Mine; 1321 West Side and 1375 East Side

Discharge Monitoring Results:

Surface Drainage System(s):

Number of Surface and Ground Water Monitoring Sites:

Monitoring Site Location(s):

Surface Water Samples:

Ground Water Samples:

Comments: Slurry pumped 200' down to Pocahontas Mine #3 workings. Gravity discharge point 5 miles away and permitted by another company. Blowout in 2005. The hole is now sealed.

Appendix II-N

SAMPLING PROCEDURE FOR STUDY

Groundwater and Surface Sampling Procedure for WV Coal Slurry Injection Study

The following are procedures for obtaining a water sample from monitoring wells, piezometers and boreholes/ shafts drilled into deep mines.

Initial inspection and Measurements of the Groundwater Monitoring Site

1) Measure and record the depth to water and total depth of the well.
2) Perform a borehole camera review of the well (optional).
Record the construction details and current conditions of the well. Determine the best method for obtaining a water sample from the well and the type of equipment needed (e.g.) pump or bailer.
3) Conduct a specific conductance profile of the water column (optional).
A profile of the water column is very useful when the well or piezometer is installed in a mine pool. Consider taking 2 separate samples of the mine pool (e.g.) shallow and deep.
4) Determine if the water in the borehole represents the mine pool or aquifer by periodically sampling the water from the borehole for stable field parameters. Measure and record the temperature, pH and conductance of the water at set intervals. The measurements should be within 10 percent and the intervals may be set at 0.2 to 0.5 borehole volumes.
5) Purge the well, if needed, 1 to 3 borehole volumes.
6) Measure and record the depth to water after purging.

Sample Collection

1) Maintain a clean area for sampling purposes. Place plastic sheeting on the ground near the well. Use this area as a working space to place instruments, sample bottles and field equipment.
2) Collect the water sample at the appropriate depth using a disposable Teflon bailer and dedicated rope. The bailer must be carefully lowered into the water to avoid plunging into the water column; avoid placing bailer on the bottom of the well.
3) Fill the organics sample bottles initially from the bottom of the disposal bailer using the discharge tube. Prevent the formation of air bubbles and fill the bottle to the top with no head room.
4) Sample bottles with preservatives should be filled with care to prevent overflow.
5) Dissolved metal samples should be filtered using a 45 micron filter before being placed into an acidified sample bottle.

6) All equipment that is not dedicated to the sampling site must be cleaned with soap (alconox) and water in a clean container (stainless steel bucket). Rinse with distilled water.

Sampling Records

- All sample bottles should have proper labels attached and placed immediately in the sample cooler. The amber glass bottles for the organic samples should be placed in sealed plastic bag.
- Each sample must be recorded on a field sampling sheet noting observations during sampling and field data measurements, time of collection, method of collection and conditions of the water samples.

Quality Assurance Sampling

- Field blanks should be determined based on site-specific conditions per sampling event. The amount of sample points per event and if the sampling equipment is decontaminated and reused at different sample points should be considered. There will be a minimum of one field blank per sampling event .
- Trip blanks should be included in every sampling event that includes VOCs on the analytical list.
- Duplicate or spiked samples can be included per sampling event.

Equipment List – Used for WV Coal Slurry Study

Waterproof pre-printed labels
Field Notebook
Maps and Directions
Wax pencil or waterproof markers
Borehole camera and tape
Generator
Strip outlets and Reinstat
Gas can
Large and long extension cord
Pump – 2", 4", 150 ft, 250 ft, 500 ft.
Controller
Tool Box with screwdrivers, electrical tape, plyers and cutters
Duct Tape
Kemmerer Bailer
Teflon or PVC bailers
Rope for Bailer
Water Level Indicator
Field Parameter Equipment – DO
Specific Conductance
PH Indicator
Filter Equipment, filters, filter paper, syringes
Bucket, stainless steel and graduated plastic
Plastic Sheeting
Straight Edge to cut sheeting
Nitrile Gloves
Distilled Water and Spray Bottles
Soap (Alconox packets)
Ziplock bags and Garbage bags
Brushes for cleaning
Paper Towels
Straight Edge to cut sh

Appendix II-O

REIC SUMMARY TABLE RESULTS

Appendix II-O-1

Southern Minerals

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

Dissolved & Total Metals		SM-1(T)		SM-1(R)		SM-2		SM-3		SM- 4	
Parameters	Unit	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total
Aluminum	mg/L	0.206	0.202	0.2	0.232	0.256	0.316	0.173	0.22	0.182	0.211
Antimony	mg/L	ND	ND	ND	ND	0.0002	0.0002	ND	ND	0.0002	ND
Arsenic	mg/L	ND	ND	0.0012	0.0017	0.0012	0.0014	ND	ND	0.0011	ND
Barium	mg/L	0.0704	0.0717	0.084	0.0918	0.0185	0.0186	0.0638	0.0642	0.0672	0.0659
Beryllium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002
Cadmium	mg/L	ND	ND	ND	ND	0.0007	0.0007	ND	ND	ND	ND
Calcium	mg/L	46.8	47.5	46.6	46.3	249	253	47.3	48.6	48.8	49.4
Chromium	mg/L	0.0015	0.0014	0.0014	0.0015	0.0013	0.0015	0.0014	0.0014	0.0014	0.0014
Cobalt	mg/L	0.0014	0.0013	0.0044	0.0046	0.0498	0.05	0.0014	0.0014	0.0014	0.0014
Copper	mg/L	0.0262	0.0128	0.0073	0.0091	0.0022	0.0023	0.0023	0.0018	0.0051	0.0051
Iron	mg/L	0.031	ND	0.92	2.05	ND	0.034	0.084	0.223	0.065	0.108
Lead	mg/L	0.0008	0.0005	0.0007	0.0031	ND	ND	ND	0.0003	0.0014	0.0004
Magnesium	mg/L	16.4	16.3	17.2	16.9	69	69.6	18.4	18.6	19	19
Manganese	mg/L	0.0030	0.0018	0.401	0.429	0.974	0.979	0.0263	0.0308	0.0171	0.0183
Mercury	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/L	0.0104	0.0044	0.0072	0.0063	0.135	0.136	0.0031	0.0025	0.0042	0.0025
Potassium	mg/L	2.63	2.62	2.54	2.45	5.03	4.94	2.97	3.01	3.24	3.01
Selenium	mg/L	ND	ND	ND	ND	0.0069	0.007	0.002	0.0019	0.002	0.002
Silicon	mg/L	4.86	4.81	4.96	4.99	0.67	0.633	3.22	3.21	3.3	3.29
Silver	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	mg/L	50	50	56.9	54.8	7.69	3.86	59.4	59.8	55.2	55.6
Strontium	mg/L	0.954	0.920	1.03	1.06	0.665	0.659	1.09	1.09	1.15	1.09
Thallium	mg/L	ND	ND	ND	ND	0.0003	0.0003	ND	ND	ND	ND
Vanadium	mg/L	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0017	0.0017	0.0017	0.0017
Zinc	mg/L	0.029	0.038	0.217	0.019	0.116	0.064	0.007	0.018	0.016	0.012

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Dissolved & Total Metals		SM-5a		SM-5b		SM-6		SM-7		SM-8 (T)	
Parameters	Unit	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total
Aluminum	mg/L	0.075	0.523	0.051	0.094	0.192	0.19	0.154	0.169	0.18	0.234
Antimony	mg/L	0.0005	0.0004	ND	0.0002	ND	ND	ND	ND	ND	ND
Arsenic	mg/L	0.0011	0.0039	ND	0.0030	0.0045	0.0049	0.0014	0.0017	0.0013	0.0013
Barium	mg/L	0.0488	0.0969	0.0737	0.0993	0.058	0.0614	0.0667	0.0676	0.256	0.283
Beryllium	mg/L	0.0002	0.0003	0.0002	0.0002	0.0003	0.0003	0.0002	0.0002	0.0003	0.0002
Cadmium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	mg/L	1.79	4.70	2.53	3.15	35.1	35.9	28.8	29	8.02	8.39
Chromium	mg/L	0.0016	0.0024	0.0015	0.0016	0.0013	0.0013	0.0012	0.0013	0.0014	0.0014
Cobalt	mg/L	0.0013	0.0072	0.0014	0.0057	0.0014	0.0014	0.0014	0.0014	0.0013	0.0013
Copper	mg/L	0.0042	0.0053	0.0017	0.0030	0.0011	0.0012	0.001	ND	0.0078	0.007
Iron	mg/L	0.069	2.75	0.037	0.520	2.85	3.35	0.356	0.848	0.021	0.038
Lead	mg/L	0.0022	0.0711	0.0028	0.0759	ND	ND	ND	ND	ND	0.0002
Magnesium	mg/L	0.745	1.06	0.805	0.943	13.6	13.2	11	10.9	3.06	3.07
Manganese	mg/L	0.0060	0.114	0.0065	0.0188	0.304	0.316	0.175	0.172	0.0041	0.0042
Mercury	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum	mg/L	0.0589	0.0439	0.0442	0.0385	ND	ND	ND	ND	0.0039	0.0038
Nickel	mg/L	0.0064	0.0101	ND	0.0051	0.0021	0.0026	ND	ND	ND	ND
Potassium	mg/L	2.42	2.74	2.37	2.36	3.19	3.31	2.72	2.71	1.27	1.32
Selenium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silicon	mg/L	0.265	0.71	0.175	0.503	2.86	4.93	4.88	4.91	4.26	4.12
Silver	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	mg/L	49.2	50.5	40.6	39.6	99.8	172	246	245	243	242
Strontium	mg/L	0.0319	0.0478	0.0395	0.0436	0.934	0.975	0.806	0.808	0.313	0.325
Thallium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/L	0.0017	0.0019	0.0016	0.0017	0.0016	0.0016	0.0016	0.0017	0.0022	0.0021
Zinc	mg/L	0.206	80.4	0.168	20.1	0.265	0.032	0.045	0.019	0.086	0.014

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Dissolved & Total Metals		SM-8(R)		SM-Slurry (Liquid)	
Parameters	**Unit**	**Dissolved**	**Total**	**Dissolved**	**Total**
Aluminum	mg/L	0.062	0.075	0.1950	0.651
Antimony	mg/L	ND	ND	0.0220	0.0215
Arsenic	mg/L	0.002	0.002	0.0039	0.0043
Barium	mg/L	0.283	0.29	0.0809	0.114
Beryllium	mg/L	0.0003	0.0002	0.0002	0.0004
Cadmium	mg/L	ND	ND	ND	ND
Calcium	mg/L	7.2	7.16	51.4000	51.7
Chromium	mg/L	0.0014	0.0014	0.0013	0.0016
Cobalt	mg/L	0.0013	0.0013	0.0021	0.0024
Copper	mg/L	0.0018	0.0022	0.0012	0.0018
Iron	mg/L	0.308	0.433	ND	0.91
Lead	mg/L	0.0006	0.001	ND	0.0008
Magnesium	mg/L	2.95	2.87	20.8	21
Manganese	mg/L	0.0311	0.0297	0.0141	0.0177
Mercury	mg/L	ND	ND	ND	ND
Molybdenum	mg/L	0.0042	0.0041	0.0176	0.0178
Nickel	mg/L	ND	ND	0.0043	0.0052
Potassium	mg/L	1.27	1.3	6.90	7.07
Selenium	mg/L	ND	ND	0.0082	0.0082
Silicon	mg/L	4.17	4.12	3.3	3.76
Silver	mg/L	0.0011	ND	ND	ND
Sodium	mg/L	245	255	58.8	55.5
Strontium	mg/L	0.314	0.308	1.16	1.1700
Thallium	mg/L	ND	ND	ND	0.0002
Vanadium	mg/L	0.0021	0.0021	0.0018	0.0021
Zinc	mg/L	0.034	0.011	0.016	0.027

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

General Chemistry		SM-1 (T)	SM-1 R	SM-2	SM-3	SM- 4	SM-5a	SM-5b	SM-6	SM-7	SM-8 T	SM-8 R	SM-Slurry (Liquid)
Parameters	**Unit**												
Nitrogen, Nitrate	mg/L	0.62	0.56	0.29	0.46	0.31	0.24	0.21	0.77	ND	ND	5.51	0.45
Nitrogen, Nitrite	mg/L	3.37	3.29	0.42	2.7	2.65	1.09	1.04	4.38	5.06	5.31	ND	2.32
Chloride	mg/L	13.2	8.62	1.63	5.15	4.96	7.41	6.24	4.65	13.9	43.7	35.1	0.18
Fluoride	mg/L	0.11	0.09	0.08	0.1	0.1	0.15	0.13	0.18	0.47	0.99	0.59	8.39
Sulfate	mg/L	67.8	69.1	932	102	99.4	11	10.2	138	141	10.4	12.5	157.00
Nitrogen, Ammonia	mg/l	ND	0.21	0.16	ND	ND	0.47	0.47	0.54	0.62	ND	0.55	0.18
Specific Conductance	umhos/cm	582	595	1690	644	634	269	228	1090	1370	1190	1220	702.00
Total Dissolved Solids	mg/L	305	322	1180	362	331	141	117	655	752	629	637	423.00
Total Suspended Solids	mg/l	3	1	5	4	9	316	167	9	4	1	5	5440.00
Acidity, Total	mg/L	70.1	46.8	8.1	ND	2.9	ND	ND	62.1	28.2	22.4	29	6.80
Alkalinity, Bicarbonate	mg/L	230	235	18.9	221	204	83.4	61.2	422	556	576	602	180.00
Alkalinity, Carbonate	mg/L	ND	ND	ND	2.9	2.4	51.8	26.9	ND	ND	3.7	3.9	1.40
Alkalinity, Total	mg/L	230	236	18.9	224	207	139	90.5	422	558	580	606	181.00
pH	SU	6.71	6.87	6.64	8.14	8.09	9.82	9.67	7.03	7.43	7.83	7.84	7.93

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

Volatile Organic Compounds		SM-1 T	SM-1 R	SM-2	SM-3	SM- 4	SM-5a	SM-5b	SM-6	SM-7	SM-8 (T)	SM-8 R	SM-Slurry (Liquid)
Parameters	**Unit**												
1,1,1,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/L	ND	ND	**10.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/L	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	**16.7**	ND	ND
Bromoform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.5**	ND	ND
Bromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Parameters		SM-1 T	SM-1 R	SM-2	SM-3	SM- 4	SM-5a	SM-5b	SM-6	SM-7	SM-8 (T)	SM-8 R	SM-Slurry (Liquid)
	Unit												
Carbon disulfide	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/L	**1.7**	ND	ND	ND	ND	ND	ND	ND	ND	**10.2**	ND	ND
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24.3**	ND	ND
Dibromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

Semivolatile Organic Compounds		SM-1 T	SM-1 R	SM-2	SM-3	SM- 4	SM-5a	SM-5b	SM-6	SM-7	SM-8 T	SM-8 R	SM-Slurry (Liquid)
Parameters	**Unit**												
1,2,4-Trichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3´-Dichlorobenzidine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Parameters		SM-1 T	SM-1 R	SM-2	SM-3	SM- 4	SM-5a	SM-5b	SM-6	SM-7	SM-8 T	SM-8 R	SM-Slurry (Liquid)
	Unit												
Chrysene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	mg/L	ND	ND	ND	ND	ND	**0.0056**	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	mg/L	ND	ND	ND	ND	ND	**0.0024**	ND	ND	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

Miscellaneous		SM-1 T	SM-1 R	SM-2	SM-3	SM- 4	SM-5a	SM-5b	SM-6	SM-7	SM-8 (T)	SM-8 (R)	SM-Slurry (Liquid)
Parameters	**Unit**												
Acrylamide	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Glycol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPH (Diesel Range)	mg/L	ND	ND	ND	ND	0.14	0.71	0.15	ND	ND	ND	ND	ND
TPH (Oil Range)	mg/L	ND	ND	ND	ND	0.4	1.81	0.37	ND	ND	ND	ND	ND
Iron-Related Bacteria	CFU/ml	100	100	2550	5000	5000	ND		2550	100	ND	2550	NA
Sulfate-Reducing Bacteria	CFU/ml	ND	5500	5500	10000	10000	1000		10000	100	ND	1000	NA

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

Metals Analyses - Solid Phase			
Parameters	**Unit**	**SM - Coal (Raw)**	**SM - Slurry Solid**
Aluminum	mg/kg		1910
Antimony	mg/kg		0.55
Arsenic	mg/kg		1.2
Barium	mg/kg		99.2
Cadmium	mg/kg		N/D
Chromium	mg/kg		2.77
Cobalt	mg/kg		1.99
Copper	mg/kg		4.59
Lead	mg/kg		2.95
Magnesium	mg/kg		620
Manganese	mg/kg		22.5
Molybdenum	mg/kg		0.395
Mercury	mg/kg		N/D
Nickel	mg/kg		4.34
Selenium	mg/kg		N/D
Silver	mg/kg		N/D
Strontium	mg/kg		16.8
Thallium	mg/kg		N/D
Vanadium	mg/kg		3.14
Calcium	mg/kg		424
Iron	mg/kg		2060
Potassium	mg/kg		931
Beryllium	mg/kg		0.425
Silicon	mg/kg		453
Sodium	mg/kg		44.3
Zinc	mg/kg		8.6

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Detection Limit)

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

General Chemistry - Solid Phase			
Parameters		**SM - Coal (Raw)**	**SM - Slurry Solid**
	Unit		
Nitrogen, Nitrate	mg/kg		ND
Nitrogen, Nitrite	mg/kg		ND
Chloride	mg/kg		ND
Fluoride	mg/kg		ND
Sulfate	mg/kg		9.35
Nitrogen, Ammonia	mg/kg		ND
Acidity, Total	mg/kg		11.40
Alkalinity, Bicarbonate	mg/kg		449.00
Alkalinity, Carbonate	mg/kg		2.30
Alkalinity, Total	mg/kg		451.00
pH	SU		7.63

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

Volatile Organic Compounds - Solid Phase

Parameters	Unit	SM - Coal (Raw)	SM - Slurry Solid Phase
1,1,1,2-Tetrachloroethane	ug/kg		ND
1,1,1-Trichloroethane	ug/kg		ND
1,1,2,2-Tetrachloroethane	ug/kg		ND
1,1,2-Trichloroethane	ug/kg		ND
1,1-Dichloroethane	ug/kg		ND
1,1-Dichloroethene	ug/kg		ND
1,1-Dichloropropene	ug/kg		ND
1,2,3-Trichlorobenzene	ug/kg		ND
1,2,3-Trichloropropane	ug/kg		ND
1,2,4-Trichlorobenzene	ug/kg		ND
1,2,4-Trimethylbenzene	ug/kg		ND
1,2-Dibromo-3-chloropropane	ug/kg		ND
1,2-Dibromoethane	ug/kg		ND
1,2-Dichlorobenzene	ug/kg		ND
1,2-Dichloroethane	ug/kg		ND
1,2-Dichloropropane	ug/kg		ND
1,3,5-Trimethylbenzene	ug/kg		ND
1,3-Dichlorobenzene	ug/kg		ND
1,3-Dichloropropane	ug/kg		ND
1,4-Dichlorobenzene	ug/kg		ND
2,2-Dichloropropane	ug/kg		ND
2-Butanone	ug/kg		ND
2-Chlorotoluene	ug/kg		ND
2-Hexanone	ug/kg		ND
4-Chlorotoluene	ug/kg		ND
4-Isopropyltoluene	ug/kg		ND
4-Methyl-2-pentanone	ug/kg		ND
Acetone	ug/kg		ND
Acrolein	ug/kg		ND
Acrylonitrile	ug/kg		ND

Parameters	Unit	SM - Coal (Raw)	SM - Slurry Solid Phase
Benzene	ug/kg		ND
Bromobenzene	ug/kg		ND
Bromochloromethane	ug/kg		ND
Bromodichloromethane	ug/kg		ND
Bromoform	ug/kg		ND
Bromomethane	ug/kg		ND
Carbon disulfide	ug/kg		ND
Carbon tetrachloride	ug/kg		ND
Chlorobenzene	ug/kg		ND
Chloroethane	ug/kg		ND
Chloroform	ug/kg		ND
Chloromethane	ug/kg		ND
cis-1,2-Dichloroethene	ug/kg		ND
cis-1,3-Dichloropropene	ug/kg		ND
Dibromochloromethane	ug/kg		ND
Dibromomethane	ug/kg		ND
Dichlorodifluoromethane	ug/kg		ND
Ethylbenzene	ug/kg		ND
Hexachlorobutadiene	ug/kg		ND
Iodomethane	ug/kg		ND
Isopropylbenzene	ug/kg		ND
m,p-Xylene	ug/kg		ND
Methyl tert-butyl ether	ug/kg		ND
Methylene chloride	ug/kg		ND
Naphthalene	ug/kg		ND
n-Butylbenzene	ug/kg		ND
n-Propylbenzene	ug/kg		ND
o-Xylene	ug/kg		ND
sec-Butylbenzene	ug/kg		ND
Styrene	ug/kg		ND
tert-Butylbenzene	ug/kg		ND
Tetrachloroethene	ug/kg		ND
Toluene	ug/kg		ND
trans-1,2-Dichloroethene	ug/kg		ND
trans-1,3-Dichloropropene	ug/kg		ND
Trichloroethene	ug/kg		ND
Trichlorofluoromethane	ug/kg		ND
Vinyl acetate	ug/kg		ND
Vinyl chloride	ug/kg		ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis
Coal Slurry Study - Southern Minerals
Collection Date - 7/17/2007

Semi-Volatile Organic Compounds - Solid Phase			
Parameters		**SM - Coal (Raw)**	**SM - Slurry Solid**
	Unit		
1,2,4-Trichlorobenzene	mg/kg		ND
1,2-Dichlorobenzene	mg/kg		ND
1,2-Diphenylhydrazine	mg/kg		ND
1,3-Dichlorobenzene	mg/kg		ND
1,4-Dichlorobenzene	mg/kg		ND
2,4,5-Trichlorophenol	mg/kg		ND
2,4,6-Trichlorophenol	mg/kg		ND
2,4-Dichlorophenol	mg/kg		ND
2,4-Dimethylphenol	mg/kg		ND
2,4-Dinitrophenol	mg/kg		ND
2,4-Dinitrotoluene	mg/kg		ND
2,6-Dinitrotoluene	mg/kg		ND
2-Chloronaphthalene	mg/kg		ND
2-Chlorophenol	mg/kg		ND
2-Nitrophenol	mg/kg		ND
3,3´-Dichlorobenzidine	mg/kg		ND
4,6-Dinitro-2-methylphenol	mg/kg		ND
4-Bromophenyl phenyl ether	mg/kg		ND
4-Chloro-3-methylphenol	mg/kg		ND
4-Chlorophenyl phenyl ether	mg/kg		ND
4-Nitrophenol	mg/kg		ND
Acenaphthene	mg/kg		ND
Acenaphthylene	mg/kg		ND
Anthracene	mg/kg		ND
Benzidine	mg/kg		ND
Benzo(a)anthracene	mg/kg		ND
Benzo(a)pyrene	mg/kg		**0.167**

Parameters	Unit	SM - Coal (Raw)	SM - Slurry Solid Phase
Benzo(b)fluoranthene	mg/kg		ND
Benzo(g,h,i)perylene	mg/kg		**0.092**
Benzo(k)fluoranthene	mg/kg		**0.191**
Bis(2-chloroethoxy)methane	mg/kg		ND
Bis(2-chloroethyl)ether	mg/kg		ND
Bis(2-chloroisopropyl)ether	mg/kg		ND
Bis(2-ethylhexyl)phthalate	mg/kg		ND
Butyl benzyl phthalate	mg/kg		ND
Chrysene	mg/kg		**0.528**
Di-n-butyl phthalate	mg/kg		ND
Di-n-octyl phthalate	mg/kg		ND
Dibenzo(a,h)anthracene	mg/kg		ND
Diethyl phthalate	mg/kg		ND
Dimethyl phthalate	mg/kg		ND
Fluoranthene	mg/kg		**0.078**
Fluorene	mg/kg		**0.327**
Hexachlorobenzene	mg/kg		ND
Hexachlorobutadiene	mg/kg		ND
Hexachlorocyclopentadiene	mg/kg		ND
Hexachloroethane	mg/kg		ND
Indeno(1,2,3-cd)pyrene	mg/kg		ND
Isophorone	mg/kg		ND
m,p-Cresol	mg/kg		ND
N-Nitrosodi-n-propylamine	mg/kg		ND
N-Nitrosodimethylamine	mg/kg		ND
N-Nitrosodiphenylamine	mg/kg		ND
Naphthalene	mg/kg		**0.069**
Nitrobenzene	mg/kg		ND
o-Cresol	mg/kg		ND
Pentachlorophenol	mg/kg		ND
Phenanthrene	mg/kg		**0.949**
Phenol	mg/kg		ND
Pyrene	mg/kg		**0.136**

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Southern Minerals

Collection Date - 7/17/2007

Miscellaneous Analyses - Solid Phase			
Parameters		**SM - Coal (Raw)**	**SM - Slurry Solid**
	Unit		
Acrylamide	mg/kg		NA
Glycol	mg/kg		ND
Cyanide	mg/kg		ND
TPH (Diesel Range)	mg/kg		280
TPH (Oil Range)	mg/kg		391
Iron-Related Bacteria	CFU/ml		NA
Sulfate-Reducing Bacteria	CFU/ml		NA

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Appendix II-O-2

Loadout, LLC

Summary of Lab Analysis
Coal Slurry Study - Load Out LLC
Collection Dates - 9/25/2007 and 6/17/2008

Dissolved & Total Metals		LL-1		LL-2		LL-3		LL-4		LL-5		LL-6		LL-7		LL-8A		LL-8B		LL-12		LL-13		LL-14		LL Slurry (Liquid)		LL Coal Leachate
Parameters	Unit	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aluminum	mg/L	0.422	3.62	0.077	0.073	0.163	0.206	0.236	0.240	0.071	0.093	0.264	0.317	0.126	0.125	0.065	0.062	0.07	0.062	1.65	11.1	0.383	0.485	0.233	0.252	0.1500	2.37	0.0540
Antimony	mg/L	0.0005	0.0005	ND	ND	ND	ND	ND	ND	ND	ND	0.0003	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0057	0.0059	0.0019
Arsenic	mg/L	0.0012	0.0017	ND	ND	ND	ND	ND	ND	ND	ND	0.0018	0.002	ND	ND	0.0011	0.0011	0.0012	ND	0.0011	0.0013	ND	ND	ND	ND	0.0042	0.0047	0.0041
Barium	mg/L	0.0624	0.0958	0.0287	0.0296	0.0324	0.0327	0.0564	0.055	0.0688	0.0737	0.0377	0.0414	0.244	0.261	0.185	0.232	0.205	0.236	0.0438	0.0474	0.0387	0.045	0.0555	0.0554	0.0974	0.133	0.0055
Beryllium	mg/L	ND	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0092	0.0092	0.0004	0.0004	ND	ND	ND	ND	ND
Cadmium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0006	0.0005	0.0014	0.0015	ND	ND	ND	ND	ND
Calcium	mg/L	9.77	9.42	5.40	5.43	29.9	30.1	37.2	37.5	9.67	15.7	51.7	51.6	15.3	14.7	7.43	7.2	6.92	7.4	285	289	256	264	57.5	57.1	62.10	63.7	2.42
Chromium	mg/L	ND	0.0013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0012	0.0014	ND	ND	ND	ND	ND	0.0013
Cobalt	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.381	0.403	0.0105	0.0135	ND	ND	ND	0.0016	ND
Copper	mg/L	0.0016	0.0036	ND	ND	ND	ND	0.0015	0.0024	0.0016	0.0011	0.0019	0.003	0.0011	0.0013	ND	ND	ND	ND	0.0157	0.0188	0.0055	0.0046	ND	ND	0.0016	0.0034	ND
Iron	mg/L	0.034	2.13	0.072	0.092	0.124	0.288	0.084	0.349	0.185	0.128	ND	0.038	0.095	0.135	0.389	2.53	0.808	2.33	42.8	43.5	0.034	0.183	0.539	0.554	ND	0.828	ND
Lead	mg/L	0.0005	0.0184	ND	ND	ND	ND	0.0003	0.0002	ND	ND	ND	0.0002	0.0003	0.0007	ND	0.0003	ND	0.0003	0.0106	0.0111	ND	0.0005	ND	ND	ND	0.0016	ND
Magnesium	mg/L	2.56	2.62	3.42	3.62	12.9	12.6	9.28	9.94	3.69	4.25	26.3	26	4.14	3.92	1.83	1.77	1.22	1.73	184	189	165	169	19.9	19.8	19.8	20.6	0.705
Manganese	mg/L	0.02	0.019	0.023	0.025	0.285	0.327	0.1	0.106	0.321	0.075	0.09	0.227	0.072	0.07	0.152	0.166	0.138	0.186	20.7	21.2	11.5	12	0.082	0.082	0.0860	0.097	ND
Mercury	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum	mg/L	0.0034	0.0034	ND	ND	0.0017	0.0017	ND	ND	ND	ND	0.0086	0.0083	0.0012	0.0013	0.0027	0.0028	0.0027	0.0027	ND	ND	ND	ND	ND	ND	0.0447	0.0466	0.0090
Nickel	mg/L	ND	0.0041	ND	ND	0.0022	0.0024	0.0035	0.0039	ND	0.0024	0.0044	0.005	ND	ND	ND	ND	ND	ND	0.77	0.822	0.249	0.284	0.0021	ND	0.0067	0.0073	ND
Potassium	mg/L	2.6	3.08	1.91	1.84	5.52	5.41	2.94	3.07	2.14	5.3	13.7	13.7	5.18	4.98	3.94	3.76	3.57	3.83	8.11	8.2	7.47	7.76	3.70	3.35	13.9	14.3	5.02
Selenium	mg/L	0.0012	0.0015	ND	ND	0.0051	0.0052	ND	ND	ND	ND	0.0295	0.0301	ND	ND	ND	ND	ND	ND	0.0039	0.0054	ND	0.002	ND	ND	0.0268	0.0278	0.0195
Silicon	mg/L	5.02	10.6	4.52	4.45	3.21	5.98	5.79	5.58	5.43	5.2	1.72	1.29	5.04	4.99	4.66	4.47	4.64	4.52	8.22	8.6	7.17	7.09	5.86	5.95	2.3	8.54	11.1
Silver	mg/L	ND	ND	0.0006	0.0005	0.0006	0.0006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0006	0.0006	ND	ND	0.0005
Sodium	mg/L	129	135	2.78	2.61	64.7	63.4	10.6	10.8	6.5	312	304	305	301	293	337	332	316	337	68.2	69.8	64.3	66.1	11.8	10.8	265	267	4.88
Strontium	mg/L	0.183	0.199	0.0363	0.0372	0.306	0.298	0.31	0.296	0.124	0.13	1.09	1.1	0.465	0.487	0.281	0.31	0.287	0.304	2.78	2.96	2.05	2.32	1.16	1.15	1.44	1.4700	0.0159
Thallium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0002	0.0003	ND	ND	ND	ND	0.0003	0.0004	ND
Vanadium	mg/L	ND	0.0019	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0011	ND	ND	ND	ND	ND	ND	0.0011	0.0013	ND	ND	ND	ND	0.0013	0.0025	0.0044
Zinc	mg/L	0.026	0.018	0.013	0.006	0.004	0.061	0.013	0.004	0.032	0.042	0.06	0.019	0.042	0.036	0.005	ND	0.005	0.021	0.192	0.266	0.259	0.263	0.006	ND	ND	0.008	0.008

*Notes ND–Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A–Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

General Chemistry Analyses Results		LL-1	LL-2	LL-3	LL-4	LL-5	LL-6	LL-7	LL-8A	LL-8B	LL-12	LL-13	LL-14	LL Slurry (Liquid)	LL Coal Leachate
Parameters	Unit														
Nitrogen, Nitrate	mg/L	0.29	0.11	0.56	0.19	0.18	ND	ND	ND	ND	0.02	ND	ND	1.85	0.07
Nitrogen, Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.35	0.17
Chloride	mg/L	33.10	0.94	9.50	1.22	2.24	40.60	62.50	72.50	72.00	21.80	19.00	1.57	84.80	1.45
Fluoride	mg/L	0.44	0.14	0.28	ND	ND	0.51	0.44	0.66	0.60	ND	ND	0.28	ND	0.55
Sulfate	mg/L	52.10	16.10	189.00	15.80	18.20	954.00	38.60	67.80	66.60	2340.00	1940.00	87.50	849.00	7.40
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen, Ammonia	mg/l	ND	ND	ND	ND	0.07	ND	ND	0.89	0.97	0.57	ND	0.20	1.27	0.34
Specific Concuctance	umhos/cm	674	69.3	608	317	123	1980	1410	1500	1500	2880	2440	502	1840	57.20
Total Dissolved Solids	mg/L	434.00	7.00	279.00	180.00	65.00	1230.00	798.00	906.00	807.00	2000.00	1710.00	249.00	933.00	21.00
Total Suspended Solids	mg/l	92.00	2.00	3.00	9.00	5.00	13.00	2.00	8.00	5.00	213.00	19.00	7.00	191.00	1.00
Acidity, Total	mg/L	4.90	1.50	1.80	7.20	20.70	ND	23.40	9.60	13.00	291.00	85.40	20.50	6.90	ND
Alkalinity, Bicarbonate	mg/L	240.00	17.50	59.90	140.00	32.50	146.00	611.00	617.00	611.00	9.00	10.50	167.00	102.00	25.50
Alkalinity, Carbonate	mg/L	2.20	ND	ND	ND	ND	6.30	2.50	4.30	5.50	ND	ND	ND	ND	6.00
Alkalinity, Total	mg/L	242.00	17.50	60.10	141.00	32.50	153.00	613.00	621.00	616.00	9.10	10.50	167.00	103.00	32.70
pH	SU	7.99	6.86	7.57	7.75	6.53	8.66	7.64	7.87	7.98	4.60	5.39	6.98	7.88	9.40

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

Volatile Organic Compounds		LL-1	LL-2	LL-3	LL-4	LL-5	LL-6	LL-7	LL-8A	LL-8B	LL-12	LL-13	LL-14	LL Slurry (Liquid)	LL Coal Leachate
Parameters	**Unit**														
1,1,1,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	**0.6**	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/L	ND	**1.4**	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7**	**14.8**
Acrolein	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	µg/L	ND	**1.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Parameters		LL-1	LL-2	LL-3	LL-4	LL-5	LL-6	LL-7	LL-8A	LL-8B	LL-12	LL-13	LL-14	LL Slurry (Liquid)	LL Coal Leachate
	Unit														
Chlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**	**1.0**
Naphthalene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/L	ND	**0.5**	**0.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.6**	**0.7**
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Coal Slurry: Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

Semivolatile Organic Compounds Analyses Results		LL-1	LL-2	LL-3	LL-4	LL-5	LL-6	LL-7	LL-8A	LL-8B	LL-12	LL-13	LL-14	LL Slurry (Liquid)	LL Coal Leachate
Parameters	**Unit**														
1,2,4-Trichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3´-Dichlorobenzidine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Parameters		LL-1	LL-2	LL-3	LL-4	LL-5	LL-6	LL-7	LL-8A	LL-8B	LL-12	LL-13	LL-14	LL Slurry (Liquid)	LL Coal Leachate
	Unit														
Bis(2-ethylhexyl)phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0143**	ND
Nitrobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0061**	ND
Phenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Coal Slurry: Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

Miscellaneous Analyses		LL-1	LL-2	LL-3	LL-4	LL-5	LL-6	LL-7	LL-8A	LL-8B	LL-12	LL-13	LL-14	LL Slurry (Liquid)	LL Coal Leachate
Parameters	**Unit**														
Acrylamide	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Glycol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPH (Diesel Range)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16.60**	ND
TPH (Oil Range)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**19.40**	ND
Oil & Grease	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron-Related Bacteria	CFU/ml	**5000**	**52500**	**52500**	**25000**	**5000**	**25000**	**25000**	**25000**	**25000**	**5000**	**5000**	**N/A**	N/A	ND
Sulfate-Reducing Bacteria	CFU/ml	**50000**	**2500**	**52500**	**100**	**10000**	**10000**	**50000**	**10000**	**50000**	**100**	**100**	**N/A**	N/A	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

Metals Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Aluminum	mg/kg	**1170**	**36.1**
Antimony	mg/kg	ND	ND
Arsenic	mg/kg	**1.56**	ND
Barium	mg/kg	**19.9**	**0.638**
Beryllium	mg/kg	**0.544**	ND
Cadmium	mg/kg	**0.0692**	N/D
Calcium	mg/kg	**453**	**84.1**
Chromium	mg/kg	**5.98**	ND
Cobalt	mg/kg	**3.80**	ND
Copper	mg/kg	**9.88**	ND
Iron	mg/kg	**1480**	**29.7**
Lead	mg/kg	**5.67**	ND
Magnesium	mg/kg	**382**	**26.2**
Manganese	mg/kg	**13.5**	**0.498**
Mercury	mg/kg	**0.052**	N/D
Molybdenum	mg/kg	**0.610**	ND
Nickel	mg/kg	**6.80**	ND
Potassium	mg/kg	**451**	**43.3**
Selenium	mg/kg	**1.96**	N/D
Silicon	mg/kg	**77.5**	**32.3**
Silver	mg/kg	ND	N/D
Sodium	mg/kg	**48.1**	**217**
Strontium	mg/kg	**13.4**	**1.57**
Thallium	mg/kg	ND	N/D
Vanadium	mg/kg	**7.93**	ND
Zinc	mg/kg	**16.5**	**2.7**

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

General Chemistry - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Nitrogen, Nitrate	mg/kg	ND	N/D
Nitrogen, Nitrite	mg/kg	ND	N/D
Chloride	mg/kg	**306**	**118**
Fluoride	mg/kg	ND	N/D
Sulfate	mg/kg	**577**	**690**
Nitrogen, Ammonia	mg/kg	**31.9**	**33.6**
Acidity, Total	mg/kg	ND	ND
Alkalinity, Bicarbonate	mg/kg	**652**	**1710**
Alkalinity, Carbonate	mg/kg	**7.7**	**86.1**
Alkalinity, Total	mg/kg	**660**	**1790**
pH	SU	**8.10**	**8.73**

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

Volatile Organic Compounds - Solid Phase			
Parameters	**Unit**	**Slurry Solid**	**Coal (Raw)**
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND
1,1,2-Trichloroethane	ug/kg	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND
1,1-Dichloropropene	ug/kg	ND	ND
1,2,3-Trichlorobenzene	ug/kg	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND
1,2,4-Trimethylbenzene	ug/kg	ND	**64.1**
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND
1,2-Dibromoethane	ug/kg	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND
1,3,5-Trimethylbenzene	ug/kg	ND	**60.1**
1,3-Dichlorobenzene	ug/kg	ND	ND
1,3-Dichloropropane	ug/kg	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND
2,2-Dichloropropane	ug/kg	ND	ND
2-Butanone	ug/kg	ND	ND
2-Chlorotoluene	ug/kg	ND	ND
2-Hexanone	ug/kg	ND	ND
4-Chlorotoluene	ug/kg	ND	ND
4-Isopropyltoluene	ug/kg	ND	ND
4-Methyl-2-pentanone	ug/kg	ND	ND
Acetone	ug/kg	**267**	ND
Acrolein	ug/kg	ND	ND
Acrylonitrile	ug/kg	ND	ND

Parameters	Unit	Slurry Solid	Coal (Raw)
Benzene	ug/kg	ND	**16.6**
Bromobenzene	ug/kg	ND	ND
Bromochloromethane	ug/kg	ND	ND
Bromodichloromethane	ug/kg	ND	ND
Bromoform	ug/kg	ND	ND
Bromomethane	ug/kg	ND	ND
Carbon disulfide	ug/kg	ND	**36.7**
Carbon tetrachloride	ug/kg	ND	ND
Chlorobenzene	ug/kg	ND	ND
Chloroethane	ug/kg	ND	ND
Chloroform	ug/kg	ND	ND
Chloromethane	ug/kg	ND	ND
cis-1,2-Dichloroethene	ug/kg	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND
Dibromochloromethane	ug/kg	ND	ND
Dibromomethane	ug/kg	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND
Ethylbenzene	ug/kg	ND	**24.9**
Hexachlorobutadiene	ug/kg	ND	ND
Iodomethane	ug/kg	ND	ND
Isopropylbenzene	ug/kg	ND	**62.2**
m,p-Xylene	ug/kg	ND	**92.6**
Methyl tert-butyl ether	ug/kg	ND	ND
Methylene chloride	ug/kg	ND	ND
Naphthalene	ug/kg	ND	ND
n-Butylbenzene	ug/kg	ND	ND
n-Propylbenzene	ug/kg	ND	ND
o-Xylene	ug/kg	ND	**53.0**
sec-Butylbenzene	ug/kg	ND	ND
Styrene	ug/kg	ND	ND
tert-Butylbenzene	ug/kg	ND	ND
Tetrachloroethene	ug/kg	ND	ND
Toluene	ug/kg	**27.6**	**205**
trans-1,2-Dichloroethene	ug/kg	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND
Trichloroethene	ug/kg	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND
Vinyl acetate	ug/kg	ND	ND
Vinyl chloride	ug/kg	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

Semi-Volatile Organic Compounds - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
1,2,4-Trichlorobenzene	mg/kg	ND	ND
1,2-Dichlorobenzene	mg/kg	ND	ND
1,2-Diphenylhydrazine	mg/kg	ND	ND
1,3-Dichlorobenzene	mg/kg	ND	ND
1,4-Dichlorobenzene	mg/kg	ND	ND
2,4,5-Trichlorophenol	mg/kg	ND	ND
2,4,6-Trichlorophenol	mg/kg	ND	ND
2,4-Dichlorophenol	mg/kg	ND	ND
2,4-Dimethylphenol	mg/kg	**1.24**	**0.482**
2,4-Dinitrophenol	mg/kg	ND	ND
2,4-Dinitrotoluene	mg/kg	ND	ND
2,6-Dinitrotoluene	mg/kg	ND	ND
2-Chloronaphthalene	mg/kg	ND	ND
2-Chlorophenol	mg/kg	ND	ND
2-Nitrophenol	mg/kg	ND	ND
3,3′-Dichlorobenzidine	mg/kg	ND	ND
4,6-Dinitro-2-methylphenol	mg/kg	ND	ND
4-Bromophenyl phenyl ether	mg/kg	ND	ND
4-Chloro-3-methylphenol	mg/kg	ND	ND
4-Chlorophenyl phenyl ether	mg/kg	ND	ND
4-Nitrophenol	mg/kg	ND	ND
Acenaphthene	mg/kg	**0.227**	**0.070**
Acenaphthylene	mg/kg	ND	ND
Anthracene	mg/kg	ND	ND
Benzidine	mg/kg	ND	ND
Benzo(a)anthracene	mg/kg	**0.563**	**0.136**

Parameters	Unit	Coal (Raw)	Slurry Solid
Benzo(a)pyrene	mg/kg	**0.834**	**0.162**
Benzo(b)fluoranthene	mg/kg	**0.859**	**0.176**
Benzo(g,h,i)perylene	mg/kg	**2.07**	**0.513**
Benzo(k)fluoranthene	mg/kg	**0.298**	**0.065**
Bis(2-chloroethoxy)methane	mg/kg	ND	ND
Bis(2-chloroethyl)ether	mg/kg	ND	ND
Bis(2-chloroisopropyl)ether	mg/kg	ND	ND
Bis(2-ethylhexyl)phthalate	mg/kg	**0.239**	ND
Butyl benzyl phthalate	mg/kg	ND	ND
Chrysene	mg/kg	**0.760**	**0.198**
Dibenzo(a,h)anthracene	mg/kg	**0.251**	**0.042**
Diethyl phthalate	mg/kg	ND	ND
Dimethyl phthalate	mg/kg	ND	ND
Di-n-butyl phthalate	mg/kg	ND	ND
Di-n-octyl phthalate	mg/kg	ND	ND
Fluoranthene	mg/kg	**0.525**	**0.119**
Fluorene	mg/kg	**0.675**	**0.184**
Hexachlorobenzene	mg/kg	ND	ND
Hexachlorobutadiene	mg/kg	ND	ND
Hexachlorocyclopentadiene	mg/kg	ND	ND
Hexachloroethane	mg/kg	ND	ND
Indeno(1,2,3-cd)pyrene	mg/kg	**0.371**	**0.074**
Isophorone	mg/kg	ND	ND
m,p-Cresol	mg/kg	**0.428**	**0.210**
Naphthalene	mg/kg	**9.61**	**2.69**
Nitrobenzene	mg/kg	ND	ND
N-Nitrosodimethylamine	mg/kg	ND	ND
N-Nitrosodi-n-propylamine	mg/kg	ND	ND
N-Nitrosodiphenylamine	mg/kg	ND	**0.171**
o-Cresol	mg/kg	**0.434**	**0.207**
Pentachlorophenol	mg/kg	ND	ND
Phenanthrene	mg/kg	**3.77**	**0.947**
Phenol	mg/kg	**0.087**	**0.068**
Pyrene	mg/kg	**0.966**	**0.225**

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Load Out LLC

Collection Dates - 9/25/2007 and 6/17/2008

Miscellaneous Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Acrylamide	mg/kg	NA	NA
Glycol	mg/kg	ND	ND
Cyanide	mg/kg	ND	ND
TPH (Diesel Range)	mg/kg	**746**	**282**
TPH (Oil Range)	mg/kg	**525**	**469**
Oil & Grease	wt%-dry	**0.035**	NA
Iron-Related Bacteria	CfU/mg	NA	NA
Sulfate-Reducing Bacteria	CFU/mg	NA	NA

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Appendix II-O-3

Panther, LLC

Summary of Lab Analysis

Coal Slurry Study Panther Mining

Collection Date - 1/23/2008

Dissolved & Total Metals Analyses		PL-2		PL-3		PL-4		PL-5		PL-6		PL-Slurry (Liquid)		PL-Coal Leachate
Parameters	Unit	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aluminum	mg/L	0.111	0.088	0.074	0.093	0.077	0.068	0.142	0.259	0.067	0.174	0.029	0.046	0.398
Antimony	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0146	0.016	0.0012
Arsenic	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	0.0055	0.0054	0.0104	0.0113	0.012
Barium	mg/L	0.0882	0.11	0.0414	0.0418	0.0344	0.0354	0.0718	0.078	0.483	0.483	0.243	0.269	0.0129
Beryllium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0011	ND
Calcium	mg/L	4.13	12.3	8.74	8.89	3.79	3.67	24.2	22	10.4	28	2.83	3.51	0.464
Chromium	mg/L	ND	ND	ND	ND	ND	ND	0.0156	0.0158	0.009	0.0055	0.0272	0.0342	ND
Cobalt	mg/L	ND	ND	ND	ND	ND	ND	0.0207	0.0231	ND	ND	0.0142	0.0161	ND
Copper	mg/L	ND	0.0083	ND	ND	ND	ND	0.0054	0.0065	ND	ND	0.0248	0.0278	ND
Iron	mg/L	0.146	0.514	0.023	0.053	ND	0.025	0.039	0.4	10.5	27.9	0.068	0.089	ND
Lead	mg/L	ND	0.0019	ND	ND	ND	ND	0.002	0.002	ND	0.001	0.0762	0.0775	ND
Magnesium	mg/L	1.55	4.72	6.29	6.55	2.95	3.21	9.36	9.55	3.02	8.35	0.591	0.771	ND
Manganese	mg/L	0.024	0.064	0.033	0.033	0.008	0.014	0.78	0.777	0.915	2.43	0.021	0.028	ND
Mercury	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.198	0.217	ND
Nickel	mg/L	ND	ND	ND	ND	ND	ND	0.027	0.0298	ND	ND	0.0386	0.0432	ND
Potassium	mg/L	1.38	4.74	0.761	0.81	0.583	0.639	3.69	3.71	1.26	3.52	5.38	7.05	1.23
Selenium	mg/L	ND	ND	ND	ND	ND	ND	0.0074	0.0079	ND	ND	0.0224	0.0255	0.0087
Silicon	mg/L	0.514	4.71	0.397	0.414	0.32	0.494	0.654	0.478	1.04	6.21	0.346	0.358	0.384
Silver	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	mg/L	98.6	291	9.44	9.73	0.828	0.873	174	176	3.39	9.58	266	341	10.1
Strontium	mg/L	0.989	1.16	0.427	0.428	0.0925	0.0903	2.04	2.01	0.267	0.264	0.571	0.632	0.0222
Thallium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/L	ND	ND	ND	ND	ND	ND	0.0052	0.0053	ND	ND	0.0103	0.0131	0.007
Zinc	mg/L	0.015	0.01	0.018	0.008	0.021	0.006	0.014	0.016	0.041	0.106	0.019	0.014	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Panther Mining

Collection Date - 1/23/2008

General Chemistry Analyses Results		PL-2	PL-3	PL-4	PL-5	PL-6	PL-Slurry (Liquid)	PL-Coal Leachate
Parameters	Unit							
Nitrogen, Nitrate	mg/L	0.08	0.70	0.95	2.24	0.02	0.59	0.03
Nitrogen, Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	69.90	31.30	2.25	194.00	16.50	423.00	7.12
Fluoride	mg/L	0.84	0.41	ND	0.15	ND	1.53	0.51
Sulfate	mg/L	78.10	106.00	39.30	334.00	18.30	261.00	2.60
Nitrogen, Ammonia	mg/l	0.39	ND	ND	0.31	1.69	1.96	0.44
Cyanide, Total	mg/l	ND	ND	ND	ND	ND	ND	ND
Specific Concuctance	µmhos/cm	1430.00	463.00	150.00	3100.00	309.00	5000.00	170.00
Total Dissolved Solids	mg/L	791.00	251.00	86.00	1660.00	161.00	2540.00	87.00
Total Suspended Solids	mg/l	2.00	2.00	1.00	7.00	40.00	74.00	6.00
Acidity, Total	mg/L	40.50	1.40	1.20	4.70	74.60	ND	ND
Acidity, Bicarbonate	mg/L	532.00	32.70	13.50	303.00	123.00	412.00	42.00
Acidity, Carbonate	mg/L	1.30	ND	ND	2.40	ND	7.10	14.30
Alkalinity, Total	mg/L	533.00	32.80	13.50	306.00	123.00	420.00	58.20
pH	SU	7.40	7.21	6.78	7.93	6.52	8.26	9.56

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Panther Mining

Collection Date - 1/23/2008

Volatile Organic Compounds Analyses Results		PL-2	PL-3	PL-4	PL-5	PL-6	PL-Slurry (Liquid)	PL-Coal Leachate
Parameters	Unit							
1,1,1,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND
2-Butanone	µg/L	ND	ND	ND	ND	ND	**68.4**	ND
2-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/L	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	µg/L	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	µg/L	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/L	ND	ND	ND	ND	ND	**16.7**	**9.9**
Acrolein	µg/L	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/L	ND	ND	ND	ND	ND	**1.8**	**1.6**
Bromobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	µg/L	ND	ND	ND	ND	ND	ND	ND

Parameters		PL-2	PL-3	PL-4	PL-5	PL-6	PL-Slurry (Liquid)	PL-Coal Leachate
	Unit							
Carbon tetrachloride	µg/L	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/L	ND	ND	ND	ND	ND	ND	ND
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	µg/L	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	µg/L	ND	ND	ND	ND	ND	**0.8**	**0.4**
Methyl tert-butyl ether	µg/L	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	µg/L	ND	ND	ND	ND	ND	ND	ND
Naphthalene	µg/L	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
o-Xylene	µg/L	ND	ND	ND	ND	ND	**0.6**	**0.3**
sec-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/L	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/L	ND	ND	ND	ND	ND	**2.8**	**2.1**
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/L	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/L	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study Panther Mining

Collection Date - 1/23/2008

Semivolatile Organic Compounds Analyses Results		PL-2	PL-3	PL-4	PL-5	PL-6	PL-Slurry (Liquid)	PL-Coal Leachate
Parameters	**Unit**							
1,2,4-Trichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	mg/L	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
3,3′-Dichlorobenzidine	mg/L	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	mg/L	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND
Benzidine	mg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	mg/L	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND

Parameters		PL-2	PL-3	PL-4	PL-5	PL-6	PL-Slurry (Liquid)	PL-Coal Leachate
	Unit							
Chrysene	mg/L	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	mg/L	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	mg/L	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	mg/L	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND
Isophorone	mg/L	ND	ND	ND	ND	ND	ND	ND
m,p-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	mg/L	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine	mg/L	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	mg/L	ND	ND	ND	ND	ND	ND	ND
o-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND	ND	ND	ND
Phenol	mg/L	ND	ND	ND	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study Panther Mining

Collection Date - 1/23/2008

Miscellaneous Analyses		PL-2	PL-3	PL-4	PL-5	PL-6	PL-Slurry (Liquid)	PL-Coal Leachate
Parameters	Unit							
Acrylamide	mg/L	ND	ND	ND	ND	ND	ND	ND
Glycol	mg/L	ND	ND	ND	ND	ND	ND	ND
TPH (Diesel Range)	mg/L	0.92	ND	ND	ND	ND	0.5100	ND
TPH (Oil Range)	mg/L	4.16	ND	ND	ND	ND	ND	ND
Oil and Grease	mg/L	2.20	ND	ND	ND	ND	ND	ND
Iron-Related Bacteria	CFU/ml	5000	5000	5000	5000	ND	ND	ND
Sulfate-Reducing Bacteria	CFU/ml	100000	10000	10000	100000	10000	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study Panther Mining

Collection Date - 1/23/2008

Metals Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Aluminum	mg/kg		3600
Antimony	mg/kg		ND
Arsenic	mg/kg		ND
Barium	mg/kg		52.3
Beryllium	mg/kg		0.385
Cadmium	mg/kg		0.0809
Calcium	mg/kg		1220
Chromium	mg/kg		4.82
Cobalt	mg/kg		2.31
Copper	mg/kg		7.54
Iron	mg/kg		6080
Lead	mg/kg		4.79
Magnesium	mg/kg		908
Manganese	mg/kg		51.9
Mercury	mg/kg		ND
Molybdenum	mg/kg		ND
Nickel	mg/kg		5.06
Potassium	mg/kg		1210
Selenium	mg/kg		ND
Silicon	mg/kg		46.3
Silver	mg/kg		ND
Sodium	mg/kg		754
Strontium	mg/kg		13.6
Thallium	mg/kg		ND
Vanadium	mg/kg		6.61
Zinc	mg/kg		17.4

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Panther Mining

Collection Date - 1/23/2008

General Chemistry - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Nitrogen, Nitrate	mg/k		ND
Nitrogen, Nitrite	mg/k		9.06
Chloride	mg/k		554
Cyanide	mg/k		ND
Fluoride	mg/k		1.86
Sulfate	mg/k		144
Nitrogen, Ammonia	mg/k		33.6
Acidity, Total	mg/k		ND
Alkalinity, Bicarbonate	mg/k		ND
Alkalinity, Carbonate	mg/k		ND
Alkalinity, Total	mg/L		1390
pH	SU		9.44

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Coal Slurry: Summary of Lab Analysis

Coal Slurry Study - Panther Mining

Collection Date - 1/23/2008

Volatile Organic Compounds - Solid Phase			
Parameters		**Coal (Raw)**	**Slurry Solid**
	Unit	**Dissolved**	**Dissolved**
1,1,1,2-Tetrachloroethane	ug/kg		ND
1,1,1-Trichloroethane	ug/kg		ND
1,1,2,2-Tetrachloroethane	ug/kg		ND
1,1,2-Trichloroethane	ug/kg		ND
1,1-Dichloroethane	ug/kg		ND
1,1-Dichloroethene	ug/kg		ND
1,1-Dichloropropene	ug/kg		ND
1,2,3-Trichlorobenzene	ug/kg		ND
1,2,3-Trichloropropane	ug/kg		ND
1,2,4-Trichlorobenzene	ug/kg		ND
1,2,4-Trimethylbenzene	ug/kg		**216**
1,2-Dibromo-3-chloropropane	ug/kg		ND
1,2-Dibromoethane	ug/kg		ND
1,2-Dichlorobenzene	ug/kg		ND
1,2-Dichloroethane	ug/kg		ND
1,2-Dichloropropane	ug/kg		ND
1,3,5-Trimethylbenzene	ug/kg		**76.8**
1,3-Dichlorobenzene	ug/kg		ND
1,3-Dichloropropane	ug/kg		ND
1,4-Dichlorobenzene	ug/kg		ND
2,2-Dichloropropane	ug/kg		ND
2-Butanone	ug/kg		ND
2-Chlorotoluene	ug/kg		ND
2-Hexanone	ug/kg		ND
4-Chlorotoluene	ug/kg		ND

Parameters		Coal (Raw)	Slurry Solid
4-Isopropyltoluene	ug/kg		ND
4-Methyl-2-pentanone	ug/kg		ND
Acetone	ug/kg		ND
Acrolein	ug/kg		ND
Acrylonitrile	ug/kg		ND
Benzene	ug/kg		**166**
Bromobenzene	ug/kg		ND
Bromochloromethane	ug/kg		ND
Bromodichloromethane	ug/kg		ND
Bromoform	ug/kg		ND
Bromomethane	ug/kg		ND
Carbon disulfide	ug/kg		ND
Carbon tetrachloride	ug/kg		ND
Chlorobenzene	ug/kg		ND
Chloroethane	ug/kg		ND
Chloroform	ug/kg		ND
Chloromethane	ug/kg		ND
cis-1,2-Dichloroethene	ug/kg		ND
cis-1,3-Dichloropropene	ug/kg		ND
Dibromochloromethane	ug/kg		ND
Dibromomethane	ug/kg		ND
Dichlorodifluoromethane	ug/kg		ND
Ethylbenzene	ug/kg		**122**
Hexachlorobutadiene	ug/kg		ND
Iodomethane	ug/kg		ND
Isopropylbenzene	ug/kg		**30.2**
m,p-Xylene	ug/kg		**585**
Methyl tert-butyl ether	ug/kg		ND
Methylene chloride	ug/kg		ND
Naphthalene	ug/kg		**259**
n-Butylbenzene	ug/kg		ND
n-Propylbenzene	ug/kg		**45.5**
o-Xylene	ug/kg		**284**

Parameters		Coal (Raw)	Slurry Solid
sec-Butylbenzene	ug/kg		**8.5**
Styrene	µg/L		ND
tert-Butylbenzene	ug/kg		ND
Tetrachloroethene	ug/kg		ND
Toluene	ug/kg		**1,040**
trans-1,2-Dichloroethene	ug/kg		ND
trans-1,3-Dichloropropene	ug/kg		ND
Trichloroethene	ug/kg		ND
Trichlorofluoromethane	ug/kg		ND
Vinyl acetate	ug/kg		ND
Vinyl chloride	ug/kg		ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Coal Slurry: Summary of Lab Analysis

Coal Slurry Study Panther Mining

Collection Date - 1/23/2008

Semi-Volatile Organic Compounds - Solid Phase

Parameters		Coal (Raw)	Slurry Solid
	Unit	Dissolved	Dissolved
1,2,4-Trichlorobenzene	mg/kg		ND
1,2-Dichlorobenzene	mg/kg		ND
1,2-Diphenylhydrazine	mg/kg		ND
1,3-Dichlorobenzene	mg/kg		ND
1,4-Dichlorobenzene	mg/kg		ND
2,4,5-Trichlorophenol	mg/kg		ND
2,4,6-Trichlorophenol	mg/kg		ND
2,4-Dichlorophenol	mg/kg		ND
2,4-Dimethylphenol	mg/kg		**0.167**
2,4-Dinitrophenol	mg/kg		ND
2,4-Dinitrotoluene	mg/kg		ND
2,6-Dinitrotoluene	mg/kg		ND
2-Chloronaphthalene	mg/kg		ND
2-Chlorophenol	mg/kg		ND
2-Nitrophenol	mg/kg		ND
3,3′-Dichlorobenzidine	mg/kg		ND
4,6-Dinitro-2-methylphenol	mg/kg		ND
4-Bromophenyl phenyl ether	mg/kg		ND
4-Chloro-3-methylphenol	mg/kg		ND
4-Chlorophenyl phenyl ether	mg/kg		ND
4-Nitrophenol	mg/kg		ND
Acenaphthene	mg/kg		ND
Acenaphthylene	mg/kg		ND
Anthracene	mg/kg		ND
Benzidine	mg/kg		ND

Parameters		Coal (Raw)	Slurry Solid
Benzo(a)anthracene	mg/kg		**0.036**
Benzo(a)pyrene	mg/kg		**0.07**
Benzo(b)fluoranthene	mg/kg		**0.082**
Benzo(g,h,i)perylene	mg/kg		**0.155**
Benzo(k)fluoranthene	mg/kg		ND
Bis(2-chloroethoxy)methane	mg/kg		ND
Bis(2-chloroethyl)ether	mg/kg		ND
Bis(2-chloroisopropyl)ether	mg/kg		ND
Bis(2-ethylhexyl)phthalate	mg/kg		ND
Butyl benzyl phthalate	mg/kg		ND
Chrysene	mg/kg		**0.206**
Dibenzo(a,h)anthracene	mg/kg		**0.032**
Diethyl phthalate	mg/kg		ND
Dimethyl phthalate	mg/kg		ND
Di-n-butyl phthalate	mg/kg		ND
Di-n-octyl phthalate	mg/kg		ND
Fluoranthene	mg/kg		**0.07**
Fluorene	mg/kg		**0.202**
Hexachlorobenzene	mg/kg		ND
Hexachlorobutadiene	mg/kg		ND
Hexachlorocyclopentadiene	mg/kg		ND
Hexachloroethane	mg/kg		ND
Indeno(1,2,3-cd)pyrene	mg/kg		ND
Isophorone	mg/kg		ND
m,p-Cresol	mg/kg		**0.089**
Naphthalene	mg/kg		**1.5**
Nitrobenzene	mg/kg		ND
N-Nitrosodimethylamine	mg/kg		ND
N-Nitrosodi-n-propylamine	mg/kg		ND
N-Nitrosodiphenylamine	mg/kg		ND
o-Cresol	mg/kg		ND

Parameters		Coal (Raw)	Slurry Solid
Pentachlorophenol	mg/kg		ND
Phenanthrene	mg/kg		**0.903**
Phenol	mg/kg		**0.045**
Pyrene	mg/kg		**0.095**

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study Panther Mining

Collection Date - 1/23/2008

Miscellaneous Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Acrylamide	mg/kg		N/A
Glycol	mg/kg		ND
TPH (Diesel Range)	mg/kg		144
TPH (Oil Range)	mg/kg		159
Iron-Related Bacteria	CFU/ml		N/A
Sulfate-Reducing Bacteria	CFU/ml		N/A

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Power Mountain

Summary of Lab Analysis

Coal Slurry Study - Power Mountain
Collection Dates - July 8, 2008

Dissolved & Total Metals		PM-1		PM-2		PM-3		PM-6		PM-7		PM-8		PM-9		PM-10		PM-11		PM-13		PM-14		PM-Slurry (Liquid)		PM-Coal Leachate
		Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Parameters	**Unit**																									
Aluminum	mg/L	0.325	0.371	0.407	0.396	0.18	0.449	0.498	1.08	0.467	0.458	0.453	0.482	0.214	0.188	0.228	0.157	0.039	0.024	0.465	0.6710	0.224	1.440	0.509	0.564	0.214
Antimony	mg/L	ND	ND	ND	ND	ND	ND	ND	0.0004	ND	ND	0.0002	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0004	0.0005	0.0018
Arsenic	mg/L	0.0034	0.0049	0.0031	0.0039	ND	0.001	0.0015	0.0019	0.0011	0.0015	0.0014	0.0014	ND	ND	ND	ND	ND	ND	0.0013	0.0014	0.0012	0.0014	ND	ND	0.0141
Barium	mg/L	0.0355	0.0432	0.033	0.0471	0.005	0.0499	0.0238	0.124	0.0479	0.0472	0.0524	0.0524	0.0461	0.0488	0.443	0.489	0.0056	0.0015	0.0318	0.0324	0.0315	0.0795	0.0523	0.0634	0.0079
Beryllium	mg/L	ND	ND	ND	ND	ND	ND	ND	0.0005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0005	ND	0.0005	ND	ND	ND
Cadmium	mg/L	ND	ND	0.0002	ND	ND	ND	0.0008	0.0004	ND	ND	ND	ND	0.0009	ND	0.0013	ND	0.0002	ND	0.0005	0.0005	ND	0.0003	ND	ND	ND
Calcium	mg/L	41.3	41.6	40.3	42.8	16	188	81.2	80.8	190	193	127	128	19.7	18.7	15.7	15.7	0.199	0.107	165	163	19.200	19.900	124.000	123.000	0.552
Chromium	mg/L	ND	0.0523	ND	ND	ND	ND	ND	0.0037	ND	0.0010	0.0022	0.0011	ND	0.001	ND	ND	ND	ND	ND	0.0014	0.0021	0.0027	ND	ND	ND
Cobalt	mg/L	0.0013	0.0012	0.0038	0.0015	0.0011	0.002	0.0034	0.0043	0.0021	0.0019	0.0081	0.0088	0.0019	ND	0.0017	ND	0.0011	ND	0.0191	0.0188	0.0011	0.0052	0.0037	0.0039	ND
Copper	mg/L	0.0019	0.0023	0.0024	0.002	0.0044	0.0024	0.0035	0.007	0.0028	0.0023	0.0018	0.002	0.0098	0.011	0.0016	ND	0.0041	0.0049	0.002	0.0057	0.0037	0.0083	0.0015	0.0016	ND
Iron	mg/L	3.7	4.74	3.06	4.82	0.064	0.095	5.1	21.2	0.161	0.077	0.023	0.114	0.024	0.022	0.604	0.486	0.032	0.021	1.210	4.050	0.091	1.470	0.030	0.195	0.038
Lead	mg/L	ND	0.0004	0.001	0.0007	0.0008	ND	0.0004	0.0077	ND	ND	ND	ND	0.0005	0.0006	0.0003	ND	0.0004	0.0005	ND	ND	0.0007	0.0059	ND	0.0004	0.0004
Magnesium	mg/L	19	19.7	19.5	20.1	15.9	146	44.9	44.7	145	148	79.7	80.1	12.9	12.7	6.13	5.85	ND	ND	68.10	67.70	10.90	11.30	81.40	82.20	ND
Manganese	mg/L	0.325	0.335	0.559	0.352	0.05	0.493	1.24	1.5	0.263	0.255	2.07	2.21	0.083	0.002	0.196	0.128	0.024	0.001	4.31	4.32	0.043	0.357	0.921	0.921	ND
Mercury	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum	mg/L	0.0039	0.0043	0.0035	0.004	ND	ND	0.0038	0.0027	ND	ND	0.0013	0.0013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0023	0.0024	0.0035
Nickel	mg/L	0.0027	0.0025	0.006	0.003	0.0029	0.0103	0.0057	0.0077	0.013	0.0123	0.0202	0.0219	0.0037	0.0024	0.0021	ND	ND	ND	0.0776	0.0766	0.0027	0.0069	0.0092	0.0096	ND
Potassium	mg/L	9.93	10.3	9.67	10.4	1.42	12.9	11.7	11.9	13.5	14.2	15.6	15.7	2.27	2.24	2.19	2.07	ND	ND	4.41	4.32	3.63	3.95	15.50	15.50	0.380
Selenium	mg/L	ND	ND	ND	ND	ND	0.0047	ND	ND	0.005	0.0051	0.0084	0.008	ND	ND	ND	ND	ND	ND	0.0027	0.0027	ND	ND	0.0057	0.0059	0.0082
Silicon	mg/L	3.76	3.78	3.77	5.62	0.265	2.31	1.28	5.57	2.36	2.44	2.75	2.35	3.66	3.77	5.36	5.38	6.17	ND	6.44	6.95	3.26	4.58	3.27	5.31	7.59
Silver	mg/L	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	ND
Sodium	mg/L	537	561	536	573	5.92	36.9	346	353	47.5	49.3	144	145	4.73	4.69	58.7	58.7	103	106	36.8	35.7	7.58	6.74	236.0	237.0	75.5
Strontium	mg/L	1.13	1.26	1.05	1.24	0.0773	0.903	2.09	1.81	1.05	1.03	1.18	1.17	0.138	0.146	0.236	0.263	0.0018	ND	0.660	0.582	0.309	0.301	1.630	1.740	0.0043
Thallium	mg/L	ND	ND	ND	ND	ND	ND	ND	0.0003	ND	ND	0.0004	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0002	0.0003	ND
Vanadium	mg/L	0.0012	0.0013	0.0012	0.0015	ND	ND	0.0011	0.0031	0.001	ND	0.0012	0.0015	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0025	ND	ND	0.0052
Zinc	mg/L	0.026	0.009	0.133	0.015	0.061	0.015	0.034	0.064	0.007	0.005	0.019	0.021	0.025	0.012	0.025	0.005	0.021	0.006	0.155	0.187	0.031	0.065	0.032	0.041	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Power Mountain

Collection Dates - July 8, 2008

General Chemistry		PM-1	PM-2	PM-3	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-13	PM-14	PM-Slurry Liquid	PM-Coal Leachate
Parameters	Unit													
Nitrogen, Nitrate	mg/l	ND	ND	1.94	0.07	2.40	2.23	0.89	ND	ND	0.16	0.32	3.45	ND
Nitrogen, Nitrite	mg/l	ND	ND	ND	ND	0.05	0.37	ND	ND	ND	ND	ND	ND	0.14
Chloride	mg/l	45.00	46.80	9.47	33.00	10.40	19.40	5.80	5.64	12.60	14.30	5.11	77.10	1.71
Fluoride	mg/l	0.42	0.40	0.07	0.31	0.12	0.18	ND	0.25	0.25	0.33	0.34	0.56	0.42
Sulfate	mg/l	733	752	1110.00	696	1220	777	72.4	ND	2.64	544.00	56.00	853.00	3.44
Nitrogen, Ammonia	mg/l	7.41	7.44	ND	5.09	0.55	7.78	ND	0.59	ND	0.17	0.04	1.16	0.35
Cyanide, Total	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductivity	µmh/cm	2860	2810	2090	2230	2240	1820	224	336	394	1340	211	2110	100
Total Dissolved Solids	mg/l	1670	1540	1810	1450	1820	1380	106	158	236	1040	114	1470	21
Total Suspended Solids	mg/l	24	36	7.0	72	1	5	3	2	3	12	634	9	1
Acidity, Total	mg/l	50.3	70.1	3.3	30.0	3.3	ND	29.0	5.9	10.7	6.3	4.7	8.7	ND
Alkalinity, Bicarbonate	mg/l	569.0	566.0	78.6	375.0	86.9	62.8	17.2	176.0	190.0	77.8	32.8	146.0	34.3
Alkalinity, Carbonate	mg/l	2.6	1.9	ND	1.2	ND	1.0	ND	ND	ND	ND	ND	ND	10.0
Alkalinity, Total	mg/l	572.0	568.0	79.1	377.0	87.7	63.9	17.2	177.0	191.0	78.1	32.8	147.0	45.8
pH	SU	7.68	7.56	7.87	7.53	7.96	8.23	6.02	7.74	7.44	7.57	6.96	7.75	9.49

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Analyzed

Summary of Lab Analysis

Coal Slurry Study - Power Mountain

Collection Dates - July 8, 2008

Volatile Organic Compounds		PM-1	PM-2	PM-3	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-13	PM-14	PM-Slurry (Liquid)	PM-Coal Leachate
Parameters	Unit													
1,1,1,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/L	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	1.4
Bromobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Parameters		PM-1	PM-2	PM-3	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-13	PM-14	PM-Slurry (Liquid)	PM-Coal Leachate
	Unit													
Carbon tetrachloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Methyl tert-butyl ether	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3
sec-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/L	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	1.9
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Power Mountain

Collection Dates - July 8, 2008

Semivolatile Organic Compounds		PM-1	PM-2	PM-3	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-13	PM-14	PM-Slurry (Liquid)	PM-Coal Leachate
Parameters	**Unit**													
1,2,4-Trichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	mg/L	ND	ND	0.0083	ND	ND	ND	0.0069	ND	ND	0.0102	0.0077	ND	0.0091
Butyl benzyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Parameters		PM-1	PM-2	PM-3	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-13	PM-14	PM-Slurry (Liquid)	PM-Coal Leachate
	Unit													
Chrysene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Power Mountain
Collection Dates - July 8, 2008

Miscellaneous Analyses		PM-1	PM-2	PM-3	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-13	PM-14	PM-Slurry (Liquid)	PM-Coal Leachate
Parameters	**Unit**													
Acrylamide		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Glycol	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPH (Diesel Range)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	ND
TPH (Oil Range)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oil and Grease	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron-Related Bacteria	CFU/ml	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate-Reducing Bacteria	CFU/ml	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Analyzed

Summary of Lab Analysis

Coal Slurry Study - Power Mountain

Collection Date - July 8, 2008

Volatile Organic Compounds - Solid Phase			
Parameters	**Unit**	**Power Mountain**	
		Slurry Soild	*Coal (Raw)*
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND
1,1,2-Trichloroethane	ug/kg	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND
1,1-Dichloropropene	ug/kg	ND	ND
1,2,3-Trichlorobenzene	ug/kg	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND
1,2,4-Trimethylbenzene	ug/kg	25.2	398
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND
1,2-Dibromoethane	ug/kg	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND
1,3,5-Trimethylbenzene	ug/kg	ND	183
1,3-Dichlorobenzene	ug/kg	ND	ND
1,3-Dichloropropane	ug/kg	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND
2,2-Dichloropropane	ug/kg	ND	ND
2-Butanone	ug/kg	ND	ND
2-Chlorotoluene	ug/kg	ND	ND
2-Hexanone	ug/kg	ND	ND
4-Chlorotoluene	ug/kg	ND	ND
4-Isopropyltoluene	ug/kg	ND	ND
4-Methyl-2-pentanone	ug/kg	ND	ND
Acetone	ug/kg	ND	ND
Acrolein	ug/kg	ND	ND
Acrylonitrile	ug/kg	ND	ND

Parameters	Unit	*Slurry Soild*	*Coal (Raw)*
Benzene	ug/kg	ND	330
Bromobenzene	ug/kg	ND	ND
Bromochloromethane	ug/kg	ND	ND
Bromodichloromethane	ug/kg	ND	ND
Bromoform	ug/kg	ND	ND
Bromomethane	ug/kg	ND	ND
Carbon disulfide	ug/kg	ND	ND
Carbon tetrachloride	ug/kg	ND	ND
Chlorobenzene	ug/kg	ND	ND
Chloroethane	ug/kg	ND	ND
Chloroform	ug/kg	ND	ND
Chloromethane	ug/kg	ND	ND
cis-1,2-Dichloroethene	ug/kg	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND
Dibromochloromethane	ug/kg	ND	ND
Dibromomethane	ug/kg	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND
Ethylbenzene	ug/kg	ND	139
Hexachlorobutadiene	ug/kg	ND	ND
Iodomethane	ug/kg	ND	ND
Isopropylbenzene	ug/kg	29.9	132
m,p-Xylene	ug/kg	44.6	976
Methyl tert-butyl ether	ug/kg	ND	ND
Methylene chloride	ug/kg	ND	23.2
n-Butylbenzene	ug/kg	ND	ND
n-Propylbenzene	ug/kg	ND	61
Naphthalene	ug/kg	34.4	99.3
o-Xylene	ug/kg	28.7	473
sec-Butylbenzene	ug/kg	ND	ND
Styrene	ug/kg	ND	ND
tert-Butylbenzene	ug/kg	ND	ND
Tetrachloroethene	ug/kg	ND	ND
Toluene	ug/kg	51.6	8670
trans-1,2-Dichloroethene	ug/kg	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND
Trichloroethene	ug/kg	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND
Vinyl acetate	ug/kg	ND	ND
Vinyl chloride	ug/kg	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis
Coal Slurry Study - Power Mountain
Collection Date - July 8, 2008

Semi-Volatile Organic Compounds - Solid Phase			
Parameters	**Unit**	**Power Mountain**	
		Slurry Soild	***Coal (Raw)***
1,2,4-Trichlorobenzene	mg/kg	ND	ND
1,2-Dichlorobenzene	mg/kg	ND	ND
1,2-Diphenylhydrazine	mg/kg	ND	ND
1,3-Dichlorobenzene	mg/kg	ND	ND
1,4-Dichlorobenzene	mg/kg	ND	ND
2,4,5-Trichlorophenol	mg/kg	ND	ND
2,4,6-Trichlorophenol	mg/kg	ND	ND
2,4-Dichlorophenol	mg/kg	ND	ND
2,4-Dimethylphenol	mg/kg	ND	0.466
2,4-Dinitrophenol	mg/kg	ND	ND
2,4-Dinitrotoluene	mg/kg	ND	ND
2,6-Dinitrotoluene	mg/kg	ND	ND
2-Chloronaphthalene	mg/kg	ND	ND
2-Chlorophenol	mg/kg	ND	ND
2-Nitrophenol	mg/kg	ND	ND
3,3'-Dichlorobenzidine	mg/kg	ND	ND
4,6-Dinitro-2-methylphenol	mg/kg	ND	ND
4-Bromophenyl phenyl ether	mg/kg	ND	ND
4-Chloro-3-methylphenol	mg/kg	ND	ND
4-Chlorophenyl phenyl ether	mg/kg	ND	ND
4-Nitrophenol	mg/kg	ND	ND
Acenaphthene	mg/kg	ND	0.072
Acenaphthylene	mg/kg	ND	ND
Anthracene	mg/kg	ND	ND
Benzidine	mg/kg	ND	ND
Benzo(a)anthracene	mg/kg	ND	0.127

Parameters	Unit	*Slurry Soild*	*Coal (Raw)*
Benzo(a)pyrene	mg/kg	0.463	0.329
Benzo(b)fluoranthene	mg/kg	ND	0.261
Benzo(g,h,i)perylene	mg/kg	0.346	0.982
Benzo(k)fluoranthene	mg/kg	ND	0.278
Bis(2-chloroethoxy)methane	mg/kg	ND	ND
Bis(2-chloroethyl)ether	mg/kg	ND	ND
Bis(2-chloroisopropyl)ether	mg/kg	ND	ND
Bis(2-ethylhexyl)phthalate	mg/kg	ND	0.217
Butyl benzyl phthalate	mg/kg	ND	ND
Chrysene	mg/kg	0.248	1.16
Di-n-butyl phthalate	mg/kg	ND	ND
Di-n-octyl phthalate	mg/kg	ND	ND
Dibenzo(a,h)anthracene	mg/kg	ND	0.183
Diethyl phthalate	mg/kg	ND	ND
Dimethyl phthalate	mg/kg	ND	ND
Fluoranthene	mg/kg	0.144	0.288
Fluorene	mg/kg	0.180	0.852
Hexachlorobenzene	mg/kg	ND	ND
Hexachlorobutadiene	mg/kg	ND	ND
Hexachlorocyclopentadiene	mg/kg	ND	ND
Hexachloroethane	mg/kg	ND	ND
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.175
Isophorone	mg/kg	ND	ND
m,p-Cresol	mg/kg	ND	0.175
N-Nitrosodi-n-propylamine	mg/kg	ND	ND
N-Nitrosodimethylamine	mg/kg	ND	ND
N-Nitrosodiphenylamine	mg/kg	ND	ND
Naphthalene	mg/kg	1.41	7.54
Nitrobenzene	mg/kg	ND	ND
o-Cresol	mg/kg	ND	0.224
Pentachlorophenol	mg/kg	ND	ND
Phenanthrene	mg/kg	1.09	4.99
Phenol	mg/kg	ND	0.075
Pyrene	mg/kg	0.169	0.447

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis
Coal Slurry Study - Power Mountain
Collection Date - July 8, 2008

Metals Analyses - Solid Phase			
Parameters	**Unit**	**Power Mountain**	
		Slurry Soild	***Coal (Raw)***
Aluminum	mg/kg	1040	8740
Antimony	mg/kg	ND	ND
Arsenic	mg/kg	2.11	4.34
Barium	mg/kg	170	137
Beryllium	mg/kg	0.289	1.29
Cadmium	mg/kg	0.149	0.577
Calcium	mg/kg	371	1640
Chromium	mg/kg	4.33	14.3
Cobalt	mg/kg	3.02	13.8
Copper	mg/kg	6.16	25.7
Iron	mg/kg	9890	33800
Lead	mg/kg	4.89	16.7
Magnesium	mg/kg	324	3150
Manganese	mg/kg	34.3	570
Mercury	mg/kg	0.112	0.044
Molybdenum	mg/kg	0.408	0.56
Nickel	mg/kg	6.10	22.10
Potassium	mg/kg	422	2160
Selenium	mg/kg	ND	ND
Silicon	mg/kg	250	342
Silver	mg/kg	ND	ND
Sodium	mg/kg	85.7	588
Strontium	mg/kg	14.4	68.9
Thallium	mg/kg	ND	ND
Vanadium	mg/kg	25.6	13.2
Zinc	mg/kg	10.3	68.9

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis
Coal Slurry Study - Power Mountain
Collection Date - July 8, 2008

General Chemistry - Solid Phase			
Parameters	**Unit**	**Power Mountain**	
		Slurry Soild	***Coal (Raw)***
Nitrogen, Nitrate	mg/kg	4.10	ND
Nitrogen, Nitrite	mg/kg	ND	ND
Chloride	mg/kg	130.00	26.10
Fluoride	mg/kg	5.10	ND
Sulfate	mg/kg	798.00	26.8
Nitrogen, Ammonia	mg/kg	20	68.3
Acidity, Total	mg/kg	ND	ND
Alkalinity, Bicarbonate	mg/kg	352.0	787.0
Alkalinity, Carbonate	mg/kg	ND	77.4
Alkalinity, Total	mg/kg	352.0	865.0
pH	SU	7.35	9.02

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Power Mountain

Collection Date - July 8, 2008

Miscellaneous Analyses - Solid Phase			
Parameters	**Unit**	**Power Mountain**	
		Slurry Solid	***Coal (Raw)***
Acrylamide	mg/kg	NA	NA
Cyanide	mg/kg	ND	ND
Glycol	mg/kg	ND	ND
TPH (Diesel Range)	mg/kg	222	927
TPH (Oil Range)	mg/kg	382	782
Iron-Related Bacteria	CFU/mg	NA	NA
Sulfate-Reducing Bacteria	CFU/mg	NA	NA

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Appendix II-O-5

Coresco

Summary of Lab Analysis

Coal Slurry Study - Coresco
Collection Date - June 26, 2008

Dissolved & Total Metals		CL-Slurry Liquid		CL-Coal Leachate
		Dissolved	Total	Dissolved
Parameters	Unit			
Aluminum	mg/L	0.532	0.644	0.356
Antimony	mg/L	0.0069	0.0071	0.0005
Arsenic	mg/L	ND	ND	0.0019
Barium	mg/L	0.0677	0.0713	0.0047
Beryllium	mg/L	ND	ND	ND
Cadmium	mg/L	ND	ND	ND
Calcium	mg/L	111	115	4.820
Chromium	mg/L	ND	ND	ND
Cobalt	mg/L	0.0027	0.0029	ND
Copper	mg/L	0.0021	0.0021	ND
Iron	mg/L	ND	0.174	0.022
Lead	mg/L	ND	ND	ND
Magnesium	mg/L	38.90	40.00	0.29
Manganese	mg/L	0.133	0.138	ND
Mercury	mg/L	ND	ND	ND
Molybdenum	mg/L	0.0290	0.0297	0.0020
Nickel	mg/L	0.0073	0.0074	ND
Potassium	mg/L	5.01	5.16	1.080
Selenium	mg/L	0.0024	0.0024	0.0019
Silicon	mg/L	1.14	3.91	0.43
Silver	mg/L	ND	ND	ND
Sodium	mg/L	272.0	279.0	12.6
Strontium	mg/L	3.19	3.270	0.16
Thallium	mg/L	ND	0.0002	ND
Vanadium	mg/L	ND	ND	0.0015
Zinc	mg/L	ND	ND	0.003

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

General Chemistry		CL- Slurry Liquid	CL-Coal Leachate
Parameters	Unit		
Nitrogen, Nitrate	mg/l	0.83	ND
Nitrogen, Nitrite	mg/l	0.16	ND
Chloride	mg/l	32.80	0.60
Fluoride	mg/l	ND	ND
Sulfate	mg/l	1110.00	14.00
Nitrogen, Ammonia	mg/l	0.72	0.14
Cyanide, Total	mg/l	ND	ND
Specific Conductivity	µmh/cm	2030	116
Total Dissolved Solids	mg/l	1340	51
Total Suspended Solids	mg/l	22	1
Acidity, Total	mg/l	5.4	ND
Alkalinity, Bicarbonate	mg/l	143.0	32.1
Alkalinity, Carbonate	mg/l	ND	6.8
Alkalinity, Total	mg/l	144.0	40.0
pH	SU	7.71	9.35

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Analyzed

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

Volatile Organic Compounds		CL-Slurry Liquid	CL-Coal Leachate
Parameters	**Unit**		
1,1,1,2-Tetrachloroethane	µg/L	ND	ND
1,1,1-Trichloroethane	µg/L	ND	ND
1,1,2,2-Tetrachloroethane	µg/L	ND	ND
1,1,2-Trichloroethane	µg/L	ND	ND
1,1-Dichloroethane	µg/L	ND	ND
1,1-Dichloroethene	µg/L	ND	ND
1,1-Dichloropropene	µg/L	ND	ND
1,2,3-Trichlorobenzene	µg/L	ND	ND
1,2,3-Trichloropropane	µg/L	ND	ND
1,2,4-Trichlorobenzene	µg/L	ND	ND
1,2,4-Trimethylbenzene	µg/L	ND	ND
1,2-Dibromo-3-chloropropane	µg/L	ND	ND
1,2-Dibromoethane	µg/L	ND	ND
1,2-Dichlorobenzene	µg/L	ND	ND
1,2-Dichloroethane	µg/L	ND	ND
1,2-Dichloropropane	µg/L	ND	ND
1,3,5-Trimethylbenzene	µg/L	ND	ND
1,3-Dichlorobenzene	µg/L	ND	ND
1,3-Dichloropropane	µg/L	ND	ND
1,4-Dichlorobenzene	µg/L	ND	ND
2,2-Dichloropropane	µg/L	ND	ND
2-Butanone	µg/L	ND	ND
2-Chlorotoluene	µg/L	ND	ND
2-Hexanone	µg/L	ND	ND
4-Chlorotoluene	µg/L	ND	ND
4-Isopropyltoluene	µg/L	ND	ND
4-Methyl-2-pentanone	µg/L	ND	ND
Acetone	µg/L	ND	ND
Acrolein	µg/L	ND	ND
Acrylonitrile	µg/L	ND	ND
Benzene	µg/L	ND	ND
Bromobenzene	µg/L	ND	ND
Bromochloromethane	µg/L	ND	ND
Bromodichloromethane	µg/L	ND	ND
Bromoform	µg/L	ND	ND
Bromomethane	µg/L	ND	ND
Carbon disulfide	µg/L	ND	ND

Parameters		CL-Slurry Liquid	CL-Coal Leachate
	Unit		
Carbon tetrachloride	µg/L	ND	ND
Chlorobenzene	µg/L	ND	ND
Chloroethane	µg/L	ND	ND
Chloroform	µg/L	ND	ND
Chloromethane	µg/L	ND	ND
cis-1,2-Dichloroethene	µg/L	ND	ND
cis-1,3-Dichloropropene	µg/L	ND	ND
Dibromochloromethane	µg/L	ND	ND
Dibromomethane	µg/L	ND	ND
Dichlorodifluoromethane	µg/L	ND	ND
Ethylbenzene	µg/L	ND	ND
Hexachlorobutadiene	µg/L	ND	ND
Iodomethane	µg/L	ND	ND
Isopropylbenzene	µg/L	ND	ND
m,p-Xylene	µg/L	ND	ND
Methyl tert-butyl ether	µg/L	ND	ND
Methylene chloride	µg/L	ND	ND
Naphthalene	µg/L	ND	ND
n-Butylbenzene	µg/L	ND	ND
n-Propylbenzene	µg/L	ND	ND
o-Xylene	µg/L	ND	ND
sec-Butylbenzene	µg/L	ND	ND
Styrene	µg/L	ND	ND
tert-Butylbenzene	µg/L	ND	ND
Tetrachloroethene	µg/L	ND	ND
Toluene	µg/L	ND	ND
trans-1,2-Dichloroethene	µg/L	ND	ND
trans-1,3-Dichloropropene	µg/L	ND	ND
Trichloroethene	µg/L	ND	ND
Trichlorofluoromethane	µg/L	ND	ND
Vinyl acetate	µg/L	ND	ND
Vinyl chloride	µg/L	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

Semivolatile Organic Compounds		CL-Slurry Liquid	CL-Coal Leachate
Parameters	**Unit**		
1,2,4-Trichlorobenzene	mg/L	ND	ND
1,2-Dichlorobenzene	mg/L	ND	ND
1,2-Diphenylhydrazine	mg/L	ND	ND
1,3-Dichlorobenzene	mg/L	ND	ND
1,4-Dichlorobenzene	mg/L	ND	ND
2,4,5-Trichlorophenol	mg/L	ND	ND
2,4,6-Trichlorophenol	mg/L	ND	ND
2,4-Dichlorophenol	mg/L	ND	ND
2,4-Dimethylphenol	mg/L	ND	ND
2,4-Dinitrophenol	mg/L	ND	ND
2,4-Dinitrotoluene	mg/L	ND	ND
2,6-Dinitrotoluene	mg/L	ND	ND
2-Chloronaphthalene	mg/L	ND	ND
2-Chlorophenol	mg/L	ND	ND
2-Nitrophenol	mg/L	ND	ND
3,3´-Dichlorobenzidine	mg/L	ND	ND
4,6-Dinitro-2-methylphenol	mg/L	ND	ND
4-Bromophenyl phenyl ether	mg/L	ND	ND
4-Chloro-3-methylphenol	mg/L	ND	ND
4-Chlorophenyl phenyl ether	mg/L	ND	ND
4-Nitrophenol	mg/L	ND	ND
Acenaphthene	mg/L	ND	ND
Acenaphthylene	mg/L	ND	ND
Anthracene	mg/L	ND	ND
Benzidine	mg/L	ND	ND
Benzo(a)anthracene	mg/L	ND	ND
Benzo(a)pyrene	mg/L	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND
Bis(2-chloroethoxy)methane	mg/L	ND	ND
Bis(2-chloroethyl)ether	mg/L	ND	ND
Bis(2-chloroisopropyl)ether	mg/L	ND	ND
Bis(2-ethylhexyl)phthalate	mg/L	ND	ND
Butyl benzyl phthalate	mg/L	ND	ND

Parameters		CL-Slurry Liquid	CL-Coal Leachate
	Unit		
Chrysene	mg/L	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND
Diethyl phthalate	mg/L	ND	ND
Dimethyl phthalate	mg/L	ND	ND
Di-n-butyl phthalate	mg/L	ND	ND
Di-n-octyl phthalate	mg/L	ND	ND
Fluoranthene	mg/L	ND	ND
Fluorene	mg/L	ND	ND
Hexachlorobenzene	mg/L	ND	ND
Hexachlorobutadiene	mg/L	ND	ND
Hexachlorocyclopentadiene	mg/L	ND	ND
Hexachloroethane	mg/L	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND
Isophorone	mg/L	ND	ND
m,p-Cresol	mg/L	ND	ND
Naphthalene	mg/L	ND	ND
Nitrobenzene	mg/L	ND	ND
N-Nitrosodimethylamine	mg/L	ND	ND
N-Nitrosodi-n-propylamine	mg/L	ND	ND
N-Nitrosodiphenylamine	mg/L	ND	ND
o-Cresol	mg/L	ND	ND
Pentachlorophenol	mg/L	ND	ND
Phenanthrene	mg/L	ND	ND
Phenol	mg/L	ND	ND
Pyrene	mg/L	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Coresco
Collection Date - June 26, 2008

Miscellaneous Analyses		CL-Slurry Liquid	CL-Coal Leachate
Parameters	**Unit**		
Acrylamide		ND	ND
Cyanide	mg/L	ND	ND
Glycol	mg/L	ND	ND
TPH (Diesel Range)	mg/L	ND	ND
TPH (Oil Range)	mg/L	ND	ND
Oil and Grease	mg/L	ND	ND
Iron-Related Bacteria	CFU/ml	NA	ND
Sulfate-Reducing Bacteria	CFU/ml	NA	5500

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Analyzed

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

Metals Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Aluminum	mg/kg	1820	1420
Antimony	mg/kg	ND	ND
Arsenic	mg/kg	10.6	4.63
Barium	mg/kg	34.9	38.9
Beryllium	mg/kg	1.4	0.525
Cadmium	mg/kg	0.312	0.145
Calcium	mg/kg	2540	3940
Chromium	mg/kg	10.7	7.47
Cobalt	mg/kg	6.34	3.66
Copper	mg/kg	10.5	7.98
Iron	mg/kg	19900	8160
Lead	mg/kg	8.06	4.09
Magnesium	mg/kg	704	584
Manganese	mg/kg	85.7	48.7
Mercury	mg/kg	0.158	0.034
Molybdenum	mg/kg	0.765	0.876
Nickel	mg/kg	11.1	7.93
Potassium	mg/kg	555	381
Selenium	mg/kg	ND	0.617
Silicon	mg/kg	174	70.8
Silver	mg/kg	ND	ND
Sodium	mg/kg	415	394
Strontium	mg/kg	84.6	84.0
Thallium	mg/kg	ND	ND
Vanadium	mg/kg	16.5	11
Zinc	mg/kg	23.9	20.3

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

General Chemistry - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Nitrogen, Nitrate	mg/k	3000	2390
Nitrogen, Nitrite	mg/k	304	251
Chloride	mg/k	265	173
Cyanide	mg/k	ND	ND
Fluoride	mg/k	35	90
Sulfate	mg/k	36100	18500
Nitrogen, Ammonia	mg/k	6.7	ND
Acidity, Total	mg/k	N/A	N/A
Alkalinity, Bicarbonate	mg/k	1700	4820
Alkalinity, Carbonate	mg/k	358	521
Alkalinity, Total	mg/L	2060	5350
pH	SU	9.35	9.06

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

Volatile Organic Compounds - Solid Phase			
Parameters		**Coal (Raw)**	**Slurry Solid**
	Unit	**Dissolved**	**Dissolved**
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND
1,1,2-Trichloroethane	ug/kg	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND
1,1-Dichloropropene	ug/kg	ND	ND
1,2,3-Trichlorobenzene	ug/kg	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND
1,2,4-Trimethylbenzene	ug/kg	**86.9**	**87.9**
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND
1,2-Dibromoethane	ug/kg	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND
1,3,5-Trimethylbenzene	ug/kg	**78.6**	**35.4**
1,3-Dichlorobenzene	ug/kg	ND	ND
1,3-Dichloropropane	ug/kg	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND
2,2-Dichloropropane	ug/kg	ND	ND
2-Butanone	ug/kg	ND	ND
2-Chlorotoluene	ug/kg	ND	ND
2-Hexanone	ug/kg	ND	ND
4-Chlorotoluene	ug/kg	ND	ND

Parameters	Unit	Coal (Raw)	Slurry Solid
4-Isopropyltoluene	ug/kg	ND	ND
4-Methyl-2-pentanone	ug/kg	ND	ND
Acetone	ug/kg	**398**	ND
Acrolein	ug/kg	**356**	ND
Acrylonitrile	ug/kg	ND	ND
Benzene	ug/kg	ND	ND
Bromobenzene	ug/kg	ND	ND
Bromochloromethane	ug/kg	ND	ND
Bromodichloromethane	ug/kg	ND	ND
Bromoform	ug/kg	ND	ND
Bromomethane	ug/kg	ND	ND
Carbon disulfide	ug/kg	ND	ND
Carbon tetrachloride	ug/kg	ND	ND
Chlorobenzene	ug/kg	ND	ND
Chloroethane	ug/kg	ND	ND
Chloroform	ug/kg	ND	ND
Chloromethane	ug/kg	ND	ND
cis-1,2-Dichloroethene	ug/kg	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND
Dibromochloromethane	ug/kg	ND	ND
Dibromomethane	ug/kg	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND
Ethylbenzene	ug/kg	ND	**20.2**
Hexachlorobutadiene	ug/kg	ND	ND
Iodomethane	ug/kg	ND	ND
Isopropylbenzene	ug/kg	**162**	**107**
m,p-Xylene	ug/kg	**44.4**	**71.4**
Methyl tert-butyl ether	ug/kg	ND	ND
Methylene chloride	ug/kg	ND	ND
Naphthalene	ug/kg	ND	ND
n-Butylbenzene	ug/kg	ND	ND
n-Propylbenzene	ug/kg	ND	**22**
o-Xylene	ug/kg	**66.8**	**72.6**

Parameters	Unit	Coal (Raw)	Slurry Solid
sec-Butylbenzene	ug/kg	ND	ND
Styrene	µg/L	ND	ND
tert-Butylbenzene	ug/kg	ND	ND
Tetrachloroethene	ug/kg	ND	ND
Toluene	ug/kg	**25.1**	**64.3**
trans-1,2-Dichloroethene	ug/kg	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND
Trichloroethene	ug/kg	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND
Vinyl acetate	ug/kg	ND	ND
Vinyl chloride	ug/kg	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

Semi-Volatile Organic Compounds - Solid Phase

Parameters		Coal (Raw)	Slurry Solid
	Unit	Dissolved	Dissolved
1,2,4-Trichlorobenzene	mg/kg	ND	ND
1,2-Dichlorobenzene	mg/kg	ND	ND
1,2-Diphenylhydrazine	mg/kg	ND	ND
1,3-Dichlorobenzene	mg/kg	ND	ND
1,4-Dichlorobenzene	mg/kg	ND	ND
2,4,5-Trichlorophenol	mg/kg	ND	ND
2,4,6-Trichlorophenol	mg/kg	ND	ND
2,4-Dichlorophenol	mg/kg	ND	ND
2,4-Dimethylphenol	mg/kg	ND	ND
2,4-Dinitrophenol	mg/kg	ND	ND
2,4-Dinitrotoluene	mg/kg	ND	ND
2,6-Dinitrotoluene	mg/kg	ND	ND
2-Chloronaphthalene	mg/kg	ND	ND
2-Chlorophenol	mg/kg	ND	ND
2-Nitrophenol	mg/kg	ND	ND
3,3´-Dichlorobenzidine	mg/kg	ND	ND
4,6-Dinitro-2-methylphenol	mg/kg	ND	ND
4-Bromophenyl phenyl ether	mg/kg	ND	ND
4-Chloro-3-methylphenol	mg/kg	ND	ND
4-Chlorophenyl phenyl ether	mg/kg	ND	ND
4-Nitrophenol	mg/kg	ND	ND
Acenaphthene	mg/kg	ND	ND
Acenaphthylene	mg/kg	ND	ND
Anthracene	mg/kg	ND	ND
Benzidine	mg/kg	ND	ND

Parameters	Unit	Coal (Raw)	Slurry Solid
Benzo(a)anthracene	mg/kg	ND	ND
Benzo(a)pyrene	mg/kg	**0.797**	**0.747**
Benzo(b)fluoranthene	mg/kg	ND	ND
Benzo(g,h,i)perylene	mg/kg	ND	ND
Benzo(k)fluoranthene	mg/kg	ND	ND
Bis(2-chloroethoxy)methane	mg/kg	ND	ND
Bis(2-chloroethyl)ether	mg/kg	ND	ND
Bis(2-chloroisopropyl)ether	mg/kg	ND	ND
Bis(2-ethylhexyl)phthalate	mg/kg	ND	ND
Butyl benzyl phthalate	mg/kg	ND	ND
Chrysene	mg/kg	**0.873**	**0.730**
Dibenzo(a,h)anthracene	mg/kg	ND	ND
Diethyl phthalate	mg/kg	ND	ND
Dimethyl phthalate	mg/kg	ND	ND
Di-n-butyl phthalate	mg/kg	ND	ND
Di-n-octyl phthalate	mg/kg	ND	ND
Fluoranthene	mg/kg	ND	ND
Fluorene	mg/kg	**1.14**	**0.843**
Hexachlorobenzene	mg/kg	ND	ND
Hexachlorobutadiene	mg/kg	ND	ND
Hexachlorocyclopentadiene	mg/kg	ND	ND
Hexachloroethane	mg/kg	ND	ND
Indeno(1,2,3-cd)pyrene	mg/kg	ND	ND
Isophorone	mg/kg	ND	ND
m,p-Cresol	mg/kg	ND	ND
Naphthalene	mg/kg	**5.24**	**4.10**
Nitrobenzene	mg/kg	ND	ND
N-Nitrosodimethylamine	mg/kg	ND	ND
N-Nitrosodi-n-propylamine	mg/kg	ND	ND
N-Nitrosodiphenylamine	mg/kg	ND	ND
o-Cresol	mg/kg	ND	ND
Pentachlorophenol	mg/kg	ND	ND
Phenanthrene	mg/kg	**6.20**	**4.22**
Phenol	mg/kg	ND	ND
Pyrene	mg/kg	ND	ND

ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

*Notes N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Coresco

Collection Date - June 26, 2008

Miscellaneous Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Acrylamide	mg/kg	NA	N/A
Glycol	mg/kg	ND	ND
TPH (Diesel Range)	mg/kg	1020	712
TPH (Oil Range)	mg/kg	740	765
Oil & Grease	wt%-dry	0.145	0.066
Iron-Related Bacteria	CFU/ml	N/A	N/A
Sulfate-Reducing Bacteria	CFU/ml	N/A	N/A

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Appendix II-O-6

Marfork

Summary of Lab Analysis

Coal Slurry Study - Marfork
Collection Date - July 10, 2008

Dissolved & Total Metals		MF-Slurry Liquid	MF-Coal Leachate	
		Dissolved/Total	Dissolved	Total
Parameters	**Unit**			
Aluminum	mg/L	N/A	0.146	1.190
Antimony	mg/L	N/A	0.0015	0.0011
Arsenic	mg/L	N/A	0.0198	0.246
Barium	mg/L	N/A	0.0227	0.695
Beryllium	mg/L	N/A	ND	0.002
Cadmium	mg/L	N/A	ND	ND
Calcium	mg/L	N/A	0.2840	1.260
Chromium	mg/L	N/A	ND	0.0054
Cobalt	mg/L	N/A	ND	0.0067
Copper	mg/L	N/A	ND	0.0248
Iron	mg/L	N/A	0.050	13.200
Lead	mg/L	N/A	0.0003	0.2170
Magnesium	mg/L	N/A	ND	2.21
Manganese	mg/L	N/A	0.001	0.142
Mercury	mg/L	N/A	ND	ND
Molybdenum	mg/L	N/A	0.0029	0.0021
Nickel	mg/L	N/A	ND	0.0110
Potassium	mg/L	N/A	0.321	0.925
Selenium	mg/L	N/A	0.0043	0.0040
Silicon	mg/L	N/A	13.20	71.00
Silver	mg/L	N/A	ND	ND
Sodium	mg/L	N/A	48.1	6.7
Strontium	mg/L	N/A	0.115	0.135
Thallium	mg/L	N/A	0.0002	0.0004
Vanadium	mg/L	N/A	0.0031	ND
Zinc	mg/L	N/A	ND	0.038

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

General Chemistry		MF-Slurry Liquid	MF-Coal Leachate
Parameters	Unit		
Nitrogen, Nitrate	mg/l	N/A	ND
Nitrogen, Nitrite	mg/l	N/A	0.10
Chloride	mg/l	N/A	1.43
Fluoride	mg/l	N/A	0.31
Sulfate	mg/l	N/A	4.55
Nitrogen, Ammonia	mg/l	N/A	0.10
Cyanide, Total	mg/l	N/A	ND
Specific Conductivity	µmh/cm	N/A	86.7
Total Dissolved Solids	mg/l	N/A	15.0
Total Suspended Solids	mg/l	N/A	1
Acidity, Total	mg/l	N/A	ND
Alkalinity, Bicarbonate	mg/l	N/A	23.2
Alkalinity, Carbonate	mg/l	N/A	6.0
Alkalinity, Total	mg/l	N/A	30.6
pH	SU	N/A	9.44

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Analyzed

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

Volatile Organic Compounds		MF-Slurry Liquid	MF-Coal Leachate
Parameters	**Unit**		
1,1,1,2-Tetrachloroethane	µg/L	N/A	ND
1,1,1-Trichloroethane	µg/L	N/A	ND
1,1,2,2-Tetrachloroethane	µg/L	N/A	ND
1,1,2-Trichloroethane	µg/L	N/A	ND
1,1-Dichloroethane	µg/L	N/A	ND
1,1-Dichloroethene	µg/L	N/A	ND
1,1-Dichloropropene	µg/L	N/A	ND
1,2,3-Trichlorobenzene	µg/L	N/A	ND
1,2,3-Trichloropropane	µg/L	N/A	ND
1,2,4-Trichlorobenzene	µg/L	N/A	ND
1,2,4-Trimethylbenzene	µg/L	N/A	ND
1,2-Dibromo-3-chloropropane	µg/L	N/A	ND
1,2-Dibromoethane	µg/L	N/A	ND
1,2-Dichlorobenzene	µg/L	N/A	ND
1,2-Dichloroethane	µg/L	N/A	ND
1,2-Dichloropropane	µg/L	N/A	ND
1,3,5-Trimethylbenzene	µg/L	N/A	ND
1,3-Dichlorobenzene	µg/L	N/A	ND
1,3-Dichloropropane	µg/L	N/A	ND
1,4-Dichlorobenzene	µg/L	N/A	ND
2,2-Dichloropropane	µg/L	N/A	ND
2-Butanone	µg/L	N/A	ND
2-Chlorotoluene	µg/L	N/A	ND
2-Hexanone	µg/L	N/A	ND
4-Chlorotoluene	µg/L	N/A	ND
4-Isopropyltoluene	µg/L	N/A	ND
4-Methyl-2-pentanone	µg/L	N/A	ND
Acetone	µg/L	N/A	ND
Acrolein	µg/L	N/A	ND
Acrylonitrile	µg/L	N/A	ND
Benzene	µg/L	N/A	ND
Bromobenzene	µg/L	N/A	ND
Bromochloromethane	µg/L	N/A	ND
Bromodichloromethane	µg/L	N/A	ND
Bromoform	µg/L	N/A	ND
Bromomethane	µg/L	N/A	ND
Carbon disulfide	µg/L	N/A	ND

Parameters		MF-Slurry Liquid	MF-Coal Leachate
	Unit	N/A	
Carbon tetrachloride	µg/L	N/A	ND
Chlorobenzene	µg/L	N/A	ND
Chloroethane	µg/L	N/A	ND
Chloroform	µg/L	N/A	ND
Chloromethane	µg/L	N/A	ND
cis-1,2-Dichloroethene	µg/L	N/A	ND
cis-1,3-Dichloropropene	µg/L	N/A	ND
Dibromochloromethane	µg/L	N/A	ND
Dibromomethane	µg/L	N/A	ND
Dichlorodifluoromethane	µg/L	N/A	ND
Ethylbenzene	µg/L	N/A	ND
Hexachlorobutadiene	µg/L	N/A	ND
Iodomethane	µg/L	N/A	ND
Isopropylbenzene	µg/L	N/A	ND
m,p-Xylene	µg/L	N/A	ND
Methyl tert-butyl ether	µg/L	N/A	ND
Methylene chloride	µg/L	N/A	ND
Naphthalene	µg/L	N/A	ND
n-Butylbenzene	µg/L	N/A	ND
n-Propylbenzene	µg/L	N/A	ND
o-Xylene	µg/L	N/A	ND
sec-Butylbenzene	µg/L	N/A	ND
Styrene	µg/L	N/A	ND
tert-Butylbenzene	µg/L	N/A	ND
Tetrachloroethene	µg/L	N/A	ND
Toluene	µg/L	N/A	**0.2**
trans-1,2-Dichloroethene	µg/L	N/A	ND
trans-1,3-Dichloropropene	µg/L	N/A	ND
Trichloroethene	µg/L	N/A	ND
Trichlorofluoromethane	µg/L	N/A	ND
Vinyl acetate	µg/L	N/A	ND
Vinyl chloride	µg/L	N/A	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

Semivolatile Organic Compounds		MF-Slurry Liquid	MF-Coal Leachate
Parameters	**Unit**		
1,2,4-Trichlorobenzene	mg/L	N/A	ND
1,2-Dichlorobenzene	mg/L	N/A	ND
1,2-Diphenylhydrazine	mg/L	N/A	ND
1,3-Dichlorobenzene	mg/L	N/A	ND
1,4-Dichlorobenzene	mg/L	N/A	ND
2,4,5-Trichlorophenol	mg/L	N/A	ND
2,4,6-Trichlorophenol	mg/L	N/A	ND
2,4-Dichlorophenol	mg/L	N/A	ND
2,4-Dimethylphenol	mg/L	N/A	ND
2,4-Dinitrophenol	mg/L	N/A	ND
2,4-Dinitrotoluene	mg/L	N/A	ND
2,6-Dinitrotoluene	mg/L	N/A	ND
2-Chloronaphthalene	mg/L	N/A	ND
2-Chlorophenol	mg/L	N/A	ND
2-Nitrophenol	mg/L	N/A	ND
3,3′-Dichlorobenzidine	mg/L	N/A	ND
4,6-Dinitro-2-methylphenol	mg/L	N/A	ND
4-Bromophenyl phenyl ether	mg/L	N/A	ND
4-Chloro-3-methylphenol	mg/L	N/A	ND
4-Chlorophenyl phenyl ether	mg/L	N/A	ND
4-Nitrophenol	mg/L	N/A	ND
Acenaphthene	mg/L	N/A	ND
Acenaphthylene	mg/L	N/A	ND
Anthracene	mg/L	N/A	ND
Benzidine	mg/L	N/A	ND
Benzo(a)anthracene	mg/L	N/A	ND
Benzo(a)pyrene	mg/L	N/A	ND
Benzo(b)fluoranthene	mg/L	N/A	ND
Benzo(g,h,i)perylene	mg/L	N/A	ND
Benzo(k)fluoranthene	mg/L	N/A	ND
Bis(2-chloroethoxy)methane	mg/L	N/A	ND
Bis(2-chloroethyl)ether	mg/L	N/A	ND
Bis(2-chloroisopropyl)ether	mg/L	N/A	ND
Bis(2-ethylhexyl)phthalate	mg/L	N/A	**0.0108**
Butyl benzyl phthalate	mg/L	N/A	ND

Parameters		MF-Slurry Liquid	MF-Coal Leachate
	Unit		
Chrysene	mg/L	N/A	ND
Dibenzo(a,h)anthracene	mg/L	N/A	ND
Diethyl phthalate	mg/L	N/A	ND
Dimethyl phthalate	mg/L	N/A	ND
Di-n-butyl phthalate	mg/L	N/A	ND
Di-n-octyl phthalate	mg/L	N/A	ND
Fluoranthene	mg/L	N/A	ND
Fluorene	mg/L	N/A	ND
Hexachlorobenzene	mg/L	N/A	ND
Hexachlorobutadiene	mg/L	N/A	ND
Hexachlorocyclopentadiene	mg/L	N/A	ND
Hexachloroethane	mg/L	N/A	ND
Indeno(1,2,3-cd)pyrene	mg/L	N/A	ND
Isophorone	mg/L	N/A	ND
m,p-Cresol	mg/L	N/A	ND
Naphthalene	mg/L	N/A	ND
Nitrobenzene	mg/L	N/A	ND
N-Nitrosodimethylamine	mg/L	N/A	ND
N-Nitrosodi-n-propylamine	mg/L	N/A	ND
N-Nitrosodiphenylamine	mg/L	N/A	ND
o-Cresol	mg/L	N/A	ND
Pentachlorophenol	mg/L	N/A	ND
Phenanthrene	mg/L	N/A	ND
Phenol	mg/L	N/A	ND
Pyrene	mg/L	N/A	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Marfork
Collection Date - July 10, 2008

Miscellaneous Analyses		MF-Slurry Liquid	MF-Coal Leachate
Parameters	**Unit**		
Acrylamide		N/A	ND
Cyanide	mg/L	N/A	ND
Glycol	mg/L	N/A	ND
TPH (Diesel Range)	mg/L	N/A	ND
TPH (Oil Range)	mg/L	N/A	ND
Oil and Grease	mg/L	N/A	ND
Iron-Related Bacteria	CFU/ml	N/A	NA
Sulfate-Reducing Bacteria	CFU/ml	N/A	NA

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Analyzed

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

Metals Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Aluminum	mg/kg	8720	3130
Antimony	mg/kg	ND	ND
Arsenic	mg/kg	159	ND
Barium	mg/kg	152	304
Beryllium	mg/kg		
Cadmium	mg/kg	0.445	0.123
Calcium	mg/kg	951	719
Chromium	mg/kg	13.9	5.55
Cobalt	mg/kg	11.2	3.81
Copper	mg/kg	27.4	10.8
Iron	mg/kg	28200	7000
Lead	mg/kg	16.2	5.86
Magnesium	mg/kg	2680	1260
Manganese	mg/kg	183	72.9
Mercury	mg/kg	0.254	ND
Molybdenum	mg/kg	1.62	ND
Nickel	mg/kg	21.5	7.68
Potassium	mg/kg	2180	1280
Selenium	mg/kg	1.17	ND
Silicon	mg/kg	321	317
Silver	mg/kg	ND	ND
Sodium	mg/kg	593	315
Strontium	mg/kg	61.4	34.6
Thallium	mg/kg	ND	ND
Vanadium	mg/kg	16.8	8.22
Zinc	mg/kg	49.1	18.7

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

General Chemistry - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Nitrogen, Nitrate	mg/k	ND	ND
Nitrogen, Nitrite	mg/k	ND	ND
Chloride	mg/k	31	173
Cyanide	mg/k	ND	ND
Fluoride	mg/k	2.54	ND
Sulfate	mg/k	260	191
Nitrogen, Ammonia	mg/k	57.1	25.8
Acidity, Total	mg/k	N/A	N/A
Alkalinity, Bicarbonate	mg/k	ND	843
Alkalinity, Carbonate	mg/k	ND	5.7
Alkalinity, Total	mg/L	594	848
pH	SU	9.2	7.86

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).
N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

Volatile Organic Compounds - Solid Phase			
Parameters		**Coal (Raw)**	**Slurry Solid**
	Unit	**Dissolved**	**Dissolved**
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND
1,1,2-Trichloroethane	ug/kg	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND
1,1-Dichloropropene	ug/kg	ND	ND
1,2,3-Trichlorobenzene	ug/kg	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND
1,2,4-Trimethylbenzene	ug/kg	166	26.7
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND
1,2-Dibromoethane	ug/kg	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND
1,3,5-Trimethylbenzene	ug/kg	94.3	22.6
1,3-Dichlorobenzene	ug/kg	ND	ND
1,3-Dichloropropane	ug/kg	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND
2,2-Dichloropropane	ug/kg	ND	ND
2-Butanone	ug/kg	ND	ND
2-Chlorotoluene	ug/kg	ND	ND
2-Hexanone	ug/kg	ND	ND
4-Chlorotoluene	ug/kg	ND	ND

Parameters	Unit	Coal (Raw)	Slurry Solid
4-Isopropyltoluene	ug/kg	ND	ND
4-Methyl-2-pentanone	ug/kg	ND	ND
Acetone	ug/kg	ND	ND
Acrolein	ug/kg	ND	ND
Acrylonitrile	ug/kg	ND	ND
Benzene	ug/kg	ND	ND
Bromobenzene	ug/kg	ND	ND
Bromochloromethane	ug/kg	ND	ND
Bromodichloromethane	ug/kg	ND	ND
Bromoform	ug/kg	ND	ND
Bromomethane	ug/kg	ND	ND
Carbon disulfide	ug/kg	ND	ND
Carbon tetrachloride	ug/kg	ND	ND
Chlorobenzene	ug/kg	ND	ND
Chloroethane	ug/kg	ND	ND
Chloroform	ug/kg	ND	ND
Chloromethane	ug/kg	ND	ND
cis-1,2-Dichloroethene	ug/kg	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND
Dibromochloromethane	ug/kg	ND	ND
Dibromomethane	ug/kg	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND
Ethylbenzene	ug/kg	24.5	ND
Hexachlorobutadiene	ug/kg	ND	ND
Iodomethane	ug/kg	ND	ND
Isopropylbenzene	ug/kg	100	34.4
m,p-Xylene	ug/kg	163	ND
Methyl tert-butyl ether	ug/kg	ND	ND
Methylene chloride	ug/kg	ND	ND
Naphthalene	ug/kg	ND	40.4
n-Butylbenzene	ug/kg	ND	ND
n-Propylbenzene	ug/kg	23.7	ND
o-Xylene	ug/kg	114	ND

Parameters	Unit	Coal (Raw)	Slurry Solid
sec-Butylbenzene	ug/kg	ND	ND
Styrene	µg/L	ND	ND
tert-Butylbenzene	ug/kg	ND	ND
Tetrachloroethene	ug/kg	ND	ND
Toluene	ug/kg	178	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND
Trichloroethene	ug/kg	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND
Vinyl acetate	ug/kg	ND	ND
Vinyl chloride	ug/kg	ND	ND

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

Semi-Volatile Organic Compounds - Solid Phase

Parameters		Coal (Raw)	Slurry Solid
	Unit	Dissolved	Dissolved
1,2,4-Trichlorobenzene	mg/kg	ND	ND
1,2-Dichlorobenzene	mg/kg	ND	ND
1,2-Diphenylhydrazine	mg/kg	ND	ND
1,3-Dichlorobenzene	mg/kg	ND	ND
1,4-Dichlorobenzene	mg/kg	ND	ND
2,4,5-Trichlorophenol	mg/kg	ND	ND
2,4,6-Trichlorophenol	mg/kg	ND	ND
2,4-Dichlorophenol	mg/kg	ND	ND
2,4-Dimethylphenol	mg/kg	0.424	ND
2,4-Dinitrophenol	mg/kg	ND	ND
2,4-Dinitrotoluene	mg/kg	ND	ND
2,6-Dinitrotoluene	mg/kg	ND	ND
2-Chloronaphthalene	mg/kg	ND	ND
2-Chlorophenol	mg/kg	ND	ND
2-Nitrophenol	mg/kg	ND	ND
3,3'-Dichlorobenzidine	mg/kg	ND	ND
4,6-Dinitro-2-methylphenol	mg/kg	ND	ND
4-Bromophenyl phenyl ether	mg/kg	ND	ND
4-Chloro-3-methylphenol	mg/kg	ND	ND
4-Chlorophenyl phenyl ether	mg/kg	ND	ND
4-Nitrophenol	mg/kg	ND	ND
Acenaphthene	mg/kg	0.197	ND
Acenaphthylene	mg/kg	ND	ND
Anthracene	mg/kg	ND	ND
Benzidine	mg/kg	ND	ND
Benzo(a)anthracene	mg/kg	ND	ND
Benzo(a)pyrene	mg/kg	0.231	ND

Parameters	Unit	Coal (Raw)	Slurry Solid
Benzo(b)fluoranthene	mg/kg	0.227	0.087
Benzo(g,h,i)perylene	mg/kg	0.420	0.098
Benzo(k)fluoranthene	mg/kg	0.213	ND
Bis(2-chloroethoxy)methane	mg/kg	ND	ND
Bis(2-chloroethyl)ether	mg/kg	ND	ND
Bis(2-chloroisopropyl)ether	mg/kg	ND	ND
Bis(2-ethylhexyl)phthalate	mg/kg	0.227	ND
Butyl benzyl phthalate	mg/kg	ND	ND
Chrysene	mg/kg	1.10	0.320
Dibenzo(a,h)anthracene	mg/kg	0.132	ND
Diethyl phthalate	mg/kg	ND	ND
Dimethyl phthalate	mg/kg	ND	ND
Di-n-butyl phthalate	mg/kg	ND	ND
Di-n-octyl phthalate	mg/kg	ND	ND
Fluoranthene	mg/kg	0.348	0.096
Fluorene	mg/kg	1.04	0.135
Hexachlorobenzene	mg/kg	ND	ND
Hexachlorobutadiene	mg/kg	ND	ND
Hexachlorocyclopentadiene	mg/kg	ND	ND
Hexachloroethane	mg/kg	ND	ND
Indeno(1.2,3-cd)pyrene	mg/kg	0.080	ND
Isophorone	mg/kg	ND	ND
m,p-Cresol	mg/kg	0.151	ND
Naphthalene	mg/kg	4.80	0.234
Nitrobenzene	mg/kg	ND	ND
N-Nitrosodimethylamine	mg/kg	ND	ND
N-Nitrosodi-n-propylamine	mg/kg	ND	ND
N-Nitrosodiphenylamine	mg/kg	ND	ND
o-Cresol	mg/kg	0.229	ND
Pentachlorophenol	mg/kg	ND	ND
Phenanthrene	mg/kg	4.76	0.604
Phenol	mg/kg	ND	ND
Pyrene	mg/kg	0.462	0.121

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Summary of Lab Analysis

Coal Slurry Study - Marfork

Collection Date - July 10, 2008

Miscellaneous Analyses - Solid Phase			
Parameters	**Unit**	**Coal (Raw)**	**Slurry Solid**
Acrylamide	mg/kg	N/A	N/A
Glycol	mg/kg	ND	ND
TPH (Diesel Range)	mg/kg	535	179
TPH (Oil Range)	mg/kg	640	258
Oil & Grease	wt%-dry	0.073	0.176
Iron-Related Bacteria	CFU/ml	N/A	N/A
Sulfate-Reducing Bacteria	CFU/ml	N/A	N/A

*Notes ND--Non-detected at the PQL (Practical Quantitation Limit) or the MDL (Minimum Dectection Limit).

N/A--Not Applicable

Appendix II-P

REIC LABORATORY SAMPLE RESULTS

Appendix II-P-1

Southern Minerals

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

October 21, 2008

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: CS STUDY

Order No.: 0707930

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 13 sample(s) on 7/18/2007 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason A. Clark

Jason Clark
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0707930**
Date: **10/21/2008**

CLIENT: WV DEP - CHARLESTON
Project: CS STUDY

REI Consultants, Inc. attests to the validity of the laboratory data generated and reported herein. All analyses performed were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. REIC technical managers have verified compliance of reported results with the REIC's Quality Control Program and SOPs except as noted in this case narrative. Any deviation from compliance is identified in this narrative and/or qualified within the Analytical Results utilizing an alphanumeric character which is explained at the bottom of each Analytical Results page.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

Samples were analyzed using the methods stated in the analytical report without modification unless otherwise noted.

Analytical methods contained in this report referencing Standard Methods are taken from the 18th Edition.

All samples analyzed on an "as-received" basis unless otherwise noted in the analytical report.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

Sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted.

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-01
Client Sample ID:	SM-6 H. ARTESIAN	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:45:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.192	mg/L		0.0200	0.100	7/24/2007 4:18:00 AM
Calcium	35.1	mg/L		0.100	0.500	7/24/2007 4:18:00 AM
Iron	2.85	mg/L		0.0200	0.100	7/24/2007 4:18:00 AM
Magnesium	13.6	mg/L		0.400	0.500	7/24/2007 4:18:00 AM
Potassium	3.19	mg/L		0.300	1.00	7/24/2007 4:18:00 AM
Silicon	2.86	mg/L		0.0100	0.100	7/30/2007 4:42:00 PM
Sodium	99.8	mg/L		0.100	0.500	7/30/2007 1:14:00 PM
Zinc	0.265	mg/L		0.0030	0.050	7/30/2007 1:14:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.190	mg/L		0.0200	0.100	7/24/2007 4:00:00 AM
Calcium	35.9	mg/L		0.100	0.500	7/24/2007 4:00:00 AM
Iron	3.35	mg/L		0.0200	0.100	7/24/2007 4:00:00 AM
Magnesium	13.2	mg/L		0.400	0.500	7/24/2007 4:00:00 AM
Potassium	3.31	mg/L		0.300	1.00	7/24/2007 4:00:00 AM
Silicon	4.93	mg/L		0.0100	0.100	7/30/2007 4:34:00 PM
Sodium	172	mg/L		0.100	0.500	7/30/2007 12:51:00 PM
Zinc	0.032	mg/L	J	0.0030	0.050	7/30/2007 12:51:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 1:41:30 PM
Arsenic	0.0045	mg/L	J	0.00100	0.0050	7/20/2007 1:41:30 PM
Barium	0.0580	mg/L		0.00100	0.0050	7/20/2007 1:41:30 PM
Beryllium	0.0003	mg/L	J	0.00020	0.0010	7/24/2007 3:20:39 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 1:41:30 PM
Chromium	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 1:41:30 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 1:41:30 PM
Copper	0.0011	mg/L	J	0.00100	0.0050	7/20/2007 1:41:30 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 1:41:30 PM
Manganese	0.304	mg/L		0.00100	0.0100	7/20/2007 1:41:30 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 1:41:30 PM
Nickel	0.0021	mg/L	J	0.00200	0.0100	7/20/2007 1:41:30 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 1:41:30 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 1:41:30 PM
Strontium	0.934	mg/L		0.00100	0.0050	7/20/2007 1:41:30 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 1:41:30 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 1:41:30 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-01
Client Sample ID:	SM-6 H. ARTESIAN	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:45:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 1:24:05 PM
Arsenic	0.0049	mg/L	J	0.00100	0.0050	7/20/2007 1:24:05 PM
Barium	0.0614	mg/L		0.00100	0.0050	7/20/2007 1:24:05 PM
Beryllium	0.0003	mg/L	J	0.00020	0.0010	7/24/2007 2:57:23 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 1:24:05 PM
Chromium	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 1:24:05 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 1:24:05 PM
Copper	0.0012	mg/L	J	0.00100	0.0050	7/20/2007 1:24:05 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 1:24:05 PM
Manganese	0.316	mg/L		0.00100	0.0100	7/20/2007 1:24:05 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 1:24:05 PM
Nickel	0.0026	mg/L	J	0.00200	0.0100	7/20/2007 1:24:05 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 1:24:05 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 1:24:05 PM
Strontium	0.975	mg/L		0.00100	0.0050	7/20/2007 1:24:05 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 1:24:05 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 1:24:05 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:09:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:05:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 10:53:45 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 3:52:02 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 3:52:02 PM
Surr: o-Terphenyl	86.3	%REC			30-130	7/26/2007 3:52:02 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 4:15:05 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00071	0.0107	7/26/2007 2:14:00 PM
Acenaphthylene	ND	mg/L		0.00102	0.0107	7/26/2007 2:14:00 PM
Anthracene	ND	mg/L		0.00133	0.0107	7/26/2007 2:14:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-01
Client Sample ID:	SM-6 H. ARTESIAN	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:45:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00076	0.0107	7/26/2007 2:14:00 PM
Benzo(a)anthracene	ND	mg/L		0.00098	0.0107	7/26/2007 2:14:00 PM
Benzo(a)pyrene	ND	mg/L		0.00127	0.0107	7/26/2007 2:14:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00156	0.0107	7/26/2007 2:14:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00202	0.0107	7/26/2007 2:14:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00136	0.0107	7/26/2007 2:14:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00074	0.0107	7/26/2007 2:14:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00096	0.0107	7/26/2007 2:14:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00098	0.0107	7/26/2007 2:14:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00643	0.0107	7/26/2007 2:14:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00123	0.0107	7/26/2007 2:14:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00338	0.0107	7/26/2007 2:14:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00160	0.0107	7/26/2007 2:14:00 PM
2-Chloronaphthalene	ND	mg/L		0.00104	0.0107	7/26/2007 2:14:00 PM
2-Chlorophenol	ND	mg/L		0.00126	0.0107	7/26/2007 2:14:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0107	7/26/2007 2:14:00 PM
Chrysene	ND	mg/L		0.00078	0.0107	7/26/2007 2:14:00 PM
o-Cresol	ND	mg/L		0.00102	0.0107	7/26/2007 2:14:00 PM
m,p-Cresol	ND	mg/L		0.00189	0.0214	7/26/2007 2:14:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00143	0.0107	7/26/2007 2:14:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00322	0.0107	7/26/2007 2:14:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00081	0.0107	7/26/2007 2:14:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00086	0.0107	7/26/2007 2:14:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00090	0.0107	7/26/2007 2:14:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00206	0.0107	7/26/2007 2:14:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00133	0.0107	7/26/2007 2:14:00 PM
Diethyl phthalate	ND	mg/L		0.00250	0.0107	7/26/2007 2:14:00 PM
Dimethyl phthalate	ND	mg/L		0.00273	0.0107	7/26/2007 2:14:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00154	0.0107	7/26/2007 2:14:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00240	0.0107	7/26/2007 2:14:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00205	0.0107	7/26/2007 2:14:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00197	0.0107	7/26/2007 2:14:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00201	0.0107	7/26/2007 2:14:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00207	0.0107	7/26/2007 2:14:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00093	0.0107	7/26/2007 2:14:00 PM
Fluoranthene	ND	mg/L		0.00168	0.0107	7/26/2007 2:14:00 PM
Fluorene	ND	mg/L		0.00082	0.0107	7/26/2007 2:14:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-01
Client Sample ID:	SM-6 H. ARTESIAN	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:45:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00097	0.0107	7/26/2007 2:14:00 PM
Hexachlorobutadiene	ND	mg/L		0.00123	0.0107	7/26/2007 2:14:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00211	0.0107	7/26/2007 2:14:00 PM
Hexachloroethane	ND	mg/L		0.00101	0.0107	7/26/2007 2:14:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00210	0.0107	7/26/2007 2:14:00 PM
Isophorone	ND	mg/L		0.00088	0.0107	7/26/2007 2:14:00 PM
Naphthalene	ND	mg/L		0.00067	0.0107	7/26/2007 2:14:00 PM
Nitrobenzene	ND	mg/L		0.00119	0.0107	7/26/2007 2:14:00 PM
2-Nitrophenol	ND	mg/L		0.00244	0.0107	7/26/2007 2:14:00 PM
4-Nitrophenol	ND	mg/L		0.00159	0.0107	7/26/2007 2:14:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00142	0.0107	7/26/2007 2:14:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00109	0.0107	7/26/2007 2:14:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00107	0.0107	7/26/2007 2:14:00 PM
Pentachlorophenol	ND	mg/L		0.00210	0.0107	7/26/2007 2:14:00 PM
Phenanthrene	ND	mg/L		0.00093	0.0107	7/26/2007 2:14:00 PM
Phenol	ND	mg/L		0.00102	0.0107	7/26/2007 2:14:00 PM
Pyrene	ND	mg/L		0.00127	0.0107	7/26/2007 2:14:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00104	0.0107	7/26/2007 2:14:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00211	0.0107	7/26/2007 2:14:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00197	0.0107	7/26/2007 2:14:00 PM
Surr: 2-Fluorophenol	48.8	%REC			21-110	7/26/2007 2:14:00 PM
Surr: Phenol-d5	35.1	%REC			10-110	7/26/2007 2:14:00 PM
Surr: 2,4,6-Tribromophenol	78.4	%REC			10-123	7/26/2007 2:14:00 PM
Surr: Nitrobenzene-d5	83.2	%REC			35-114	7/26/2007 2:14:00 PM
Surr: 2-Fluorobiphenyl	69.8	%REC			43-116	7/26/2007 2:14:00 PM
Surr: 4-Terphenyl-d14	94.6	%REC			33-141	7/26/2007 2:14:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 2:14:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 10:48:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 10:48:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 10:48:00 AM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 10:48:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 10:48:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 10:48:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 10:48:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 10:48:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-01
Client Sample ID:	SM-6 H. ARTESIAN	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:45:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 10:48:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 10:48:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 10:48:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 10:48:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 10:48:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 10:48:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 10:48:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 10:48:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 10:48:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 10:48:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 10:48:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 10:48:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 10:48:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 10:48:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 10:48:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 10:48:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 10:48:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 10:48:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 10:48:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 10:48:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 10:48:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 10:48:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 10:48:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 10:48:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 10:48:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 10:48:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 10:48:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 10:48:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 10:48:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 10:48:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 10:48:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 10:48:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 10:48:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 10:48:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 10:48:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 10:48:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 10:48:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-01
Client Sample ID:	SM-6 H. ARTESIAN	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:45:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 10:48:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 10:48:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 10:48:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 10:48:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 10:48:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 10:48:00 AM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 10:48:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 10:48:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 10:48:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 10:48:00 AM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 10:48:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 10:48:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 10:48:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 10:48:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 10:48:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 10:48:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 10:48:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 10:48:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 10:48:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 10:48:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 10:48:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 10:48:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 10:48:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 10:48:00 AM
Surr: 1,2-Dichloroethane-d4	103	%REC			80-120	7/20/2007 10:48:00 AM
Surr: 4-Bromofluorobenzene	97.2	%REC			86-115	7/20/2007 10:48:00 AM
Surr: Dibromofluoromethane	100	%REC			80-120	7/20/2007 10:48:00 AM
Surr: Toluene-d8	103	%REC			88-110	7/20/2007 10:48:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 10:48:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **BS**
Iron Related Bacteria	2,550	CFU/mL		NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-01
Client Sample ID:	SM-6 H. ARTESIAN	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:45:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.77	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	4.38	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	4.65	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.18	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	138	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.54	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,090	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	655	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	9	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	62.1	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	422	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	422	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.03	SU		0	NA	7/23/2007 10:45:00 AM

Key:				
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-02
Client Sample ID:	SM-7 CAPELS D	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 4:50:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.154	mg/L		0.0200	0.100	7/24/2007 4:29:00 AM
Calcium	28.8	mg/L		0.100	0.500	7/24/2007 4:29:00 AM
Iron	0.356	mg/L		0.0200	0.100	7/24/2007 4:29:00 AM
Magnesium	11.0	mg/L		0.400	0.500	7/24/2007 4:29:00 AM
Potassium	2.72	mg/L		0.300	1.00	7/24/2007 4:29:00 AM
Silicon	4.88	mg/L		0.0100	0.100	7/30/2007 4:46:00 PM
Sodium	246	mg/L		0.100	0.500	7/30/2007 1:26:00 PM
Zinc	0.045	mg/L	J	0.0030	0.050	7/30/2007 1:26:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.169	mg/L		0.0200	0.100	7/24/2007 4:23:00 AM
Calcium	29.0	mg/L		0.100	0.500	7/24/2007 4:23:00 AM
Iron	0.848	mg/L		0.0200	0.100	7/24/2007 4:23:00 AM
Magnesium	10.9	mg/L		0.400	0.500	7/24/2007 4:23:00 AM
Potassium	2.71	mg/L		0.300	1.00	7/24/2007 4:23:00 AM
Silicon	4.91	mg/L		0.0100	0.100	7/30/2007 4:44:00 PM
Sodium	245	mg/L		0.100	0.500	7/30/2007 1:20:00 PM
Zinc	0.019	mg/L	J	0.0030	0.050	7/30/2007 1:20:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 2:04:38 PM
Arsenic	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:04:38 PM
Barium	0.0667	mg/L		0.00100	0.0050	7/20/2007 2:04:38 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 3:32:18 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:04:38 PM
Chromium	0.0012	mg/L	J	0.00100	0.0050	7/20/2007 2:04:38 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:04:38 PM
Copper	0.0010	mg/L	J	0.00100	0.0050	7/20/2007 2:04:38 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 2:04:38 PM
Manganese	0.175	mg/L		0.00100	0.0100	7/20/2007 2:04:38 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 2:04:38 PM
Nickel	ND	mg/L		0.00200	0.0100	7/20/2007 2:04:38 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 2:04:38 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:04:38 PM
Strontium	0.806	mg/L		0.00100	0.0050	7/20/2007 2:04:38 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:04:38 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 2:04:38 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-02
Client Sample ID:	SM-7 CAPELS D	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 4:50:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 1:47:17 PM
Arsenic	0.0017	mg/L	J	0.00100	0.0050	7/20/2007 1:47:17 PM
Barium	0.0676	mg/L		0.00100	0.0050	7/20/2007 1:47:17 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 3:26:29 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 1:47:17 PM
Chromium	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 1:47:17 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 1:47:17 PM
Copper	ND	mg/L		0.00100	0.0050	7/20/2007 1:47:17 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 1:47:17 PM
Manganese	0.172	mg/L		0.00100	0.0100	7/20/2007 1:47:17 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 1:47:17 PM
Nickel	ND	mg/L		0.00200	0.0100	7/20/2007 1:47:17 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 1:47:17 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 1:47:17 PM
Strontium	0.808	mg/L		0.00100	0.0050	7/20/2007 1:47:17 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 1:47:17 PM
Vanadium	0.0017	mg/L	J	0.00100	0.0100	7/20/2007 1:47:17 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:15:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:13:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 11:06:17 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 4:26:14 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 4:26:14 PM
Surr: o-Terphenyl	87.5	%REC			30-130	7/26/2007 4:26:14 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 4:47:15 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00068	0.0103	7/26/2007 2:40:00 PM
Acenaphthylene	ND	mg/L		0.00098	0.0103	7/26/2007 2:40:00 PM
Anthracene	ND	mg/L		0.00127	0.0103	7/26/2007 2:40:00 PM

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-02
Client Sample ID:	SM-7 CAPELS D	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 4:50:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00073	0.0103	7/26/2007 2:40:00 PM
Benzo(a)anthracene	ND	mg/L		0.00094	0.0103	7/26/2007 2:40:00 PM
Benzo(a)pyrene	ND	mg/L		0.00122	0.0103	7/26/2007 2:40:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00150	0.0103	7/26/2007 2:40:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00194	0.0103	7/26/2007 2:40:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00130	0.0103	7/26/2007 2:40:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00071	0.0103	7/26/2007 2:40:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00092	0.0103	7/26/2007 2:40:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00093	0.0103	7/26/2007 2:40:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00616	0.0103	7/26/2007 2:40:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00118	0.0103	7/26/2007 2:40:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00324	0.0103	7/26/2007 2:40:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00154	0.0103	7/26/2007 2:40:00 PM
2-Chloronaphthalene	ND	mg/L		0.00100	0.0103	7/26/2007 2:40:00 PM
2-Chlorophenol	ND	mg/L		0.00121	0.0103	7/26/2007 2:40:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00073	0.0103	7/26/2007 2:40:00 PM
Chrysene	ND	mg/L		0.00074	0.0103	7/26/2007 2:40:00 PM
o-Cresol	ND	mg/L		0.00098	0.0103	7/26/2007 2:40:00 PM
m,p-Cresol	ND	mg/L		0.00181	0.0205	7/26/2007 2:40:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00137	0.0103	7/26/2007 2:40:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00308	0.0103	7/26/2007 2:40:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00078	0.0103	7/26/2007 2:40:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00082	0.0103	7/26/2007 2:40:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00086	0.0103	7/26/2007 2:40:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00197	0.0103	7/26/2007 2:40:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00128	0.0103	7/26/2007 2:40:00 PM
Diethyl phthalate	ND	mg/L		0.00239	0.0103	7/26/2007 2:40:00 PM
Dimethyl phthalate	ND	mg/L		0.00261	0.0103	7/26/2007 2:40:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00147	0.0103	7/26/2007 2:40:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00230	0.0103	7/26/2007 2:40:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00196	0.0103	7/26/2007 2:40:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00189	0.0103	7/26/2007 2:40:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00192	0.0103	7/26/2007 2:40:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00198	0.0103	7/26/2007 2:40:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00089	0.0103	7/26/2007 2:40:00 PM
Fluoranthene	ND	mg/L		0.00161	0.0103	7/26/2007 2:40:00 PM
Fluorene	ND	mg/L		0.00078	0.0103	7/26/2007 2:40:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-02
Client Sample ID:	SM-7 CAPELS D	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 4:50:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00093	0.0103	7/26/2007 2:40:00 PM
Hexachlorobutadiene	ND	mg/L		0.00118	0.0103	7/26/2007 2:40:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00202	0.0103	7/26/2007 2:40:00 PM
Hexachloroethane	ND	mg/L		0.00097	0.0103	7/26/2007 2:40:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00201	0.0103	7/26/2007 2:40:00 PM
Isophorone	ND	mg/L		0.00084	0.0103	7/26/2007 2:40:00 PM
Naphthalene	ND	mg/L		0.00064	0.0103	7/26/2007 2:40:00 PM
Nitrobenzene	ND	mg/L		0.00114	0.0103	7/26/2007 2:40:00 PM
2-Nitrophenol	ND	mg/L		0.00234	0.0103	7/26/2007 2:40:00 PM
4-Nitrophenol	ND	mg/L		0.00153	0.0103	7/26/2007 2:40:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00136	0.0103	7/26/2007 2:40:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00105	0.0103	7/26/2007 2:40:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00103	0.0103	7/26/2007 2:40:00 PM
Pentachlorophenol	ND	mg/L		0.00201	0.0103	7/26/2007 2:40:00 PM
Phenanthrene	ND	mg/L		0.00089	0.0103	7/26/2007 2:40:00 PM
Phenol	ND	mg/L		0.00098	0.0103	7/26/2007 2:40:00 PM
Pyrene	ND	mg/L		0.00122	0.0103	7/26/2007 2:40:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00100	0.0103	7/26/2007 2:40:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00202	0.0103	7/26/2007 2:40:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00189	0.0103	7/26/2007 2:40:00 PM
Surr: 2-Fluorophenol	48.7	%REC			21-110	7/26/2007 2:40:00 PM
Surr: Phenol-d5	33.0	%REC			10-110	7/26/2007 2:40:00 PM
Surr: 2,4,6-Tribromophenol	76.0	%REC			10-123	7/26/2007 2:40:00 PM
Surr: Nitrobenzene-d5	80.4	%REC			35-114	7/26/2007 2:40:00 PM
Surr: 2-Fluorobiphenyl	69.0	%REC			43-116	7/26/2007 2:40:00 PM
Surr: 4-Terphenyl-d14	94.9	%REC			33-141	7/26/2007 2:40:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 2:40:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 11:21:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 11:21:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 11:21:00 AM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 11:21:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 11:21:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 11:21:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 11:21:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 11:21:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-02
Client Sample ID:	SM-7 CAPELS D	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 4:50:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 11:21:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 11:21:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 11:21:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 11:21:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 11:21:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 11:21:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 11:21:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 11:21:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 11:21:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 11:21:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 11:21:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 11:21:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 11:21:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 11:21:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 11:21:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 11:21:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 11:21:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 11:21:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 11:21:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 11:21:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 11:21:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 11:21:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 11:21:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 11:21:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 11:21:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 11:21:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 11:21:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 11:21:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 11:21:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 11:21:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 11:21:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 11:21:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 11:21:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 11:21:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 11:21:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 11:21:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 11:21:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-02
Client Sample ID:	SM-7 CAPELS D	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 4:50:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 11:21:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 11:21:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 11:21:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 11:21:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 11:21:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 11:21:00 AM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 11:21:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 11:21:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 11:21:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 11:21:00 AM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 11:21:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 11:21:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 11:21:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 11:21:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 11:21:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 11:21:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 11:21:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 11:21:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 11:21:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 11:21:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 11:21:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 11:21:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 11:21:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 11:21:00 AM
Surr: 1,2-Dichloroethane-d4	107	%REC			80-120	7/20/2007 11:21:00 AM
Surr: 4-Bromofluorobenzene	95.2	%REC			86-115	7/20/2007 11:21:00 AM
Surr: Dibromofluoromethane	105	%REC			80-120	7/20/2007 11:21:00 AM
Surr: Toluene-d8	102	%REC			88-110	7/20/2007 11:21:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 11:21:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	100	CFU/mL		NA	100	7/19/2007 3:05:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	100	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-02
Client Sample ID:	SM-7 CAPELS D	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 4:50:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	5.06	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	13.9	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.47	mg/L		0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	141	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.62	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,370	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	752	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	4	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	28.2	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	556	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	558	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.43	SU		0	NA	7/23/2007 10:45:00 AM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-03
Client Sample ID:	SM-2 UP ELKH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 1:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.256	mg/L		0.0200	0.100	7/24/2007 4:53:00 AM
Calcium	249	mg/L		0.100	0.500	7/24/2007 4:53:00 AM
Iron	ND	mg/L		0.0200	0.100	7/24/2007 4:53:00 AM
Magnesium	69.0	mg/L		0.400	0.500	7/24/2007 4:53:00 AM
Potassium	5.03	mg/L		0.300	1.00	7/24/2007 4:53:00 AM
Silicon	0.670	mg/L		0.0100	0.100	7/30/2007 4:54:00 PM
Sodium	7.69	mg/L		0.100	0.500	7/30/2007 1:49:00 PM
Zinc	0.116	mg/L		0.0030	0.050	7/30/2007 1:49:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.316	mg/L		0.0200	0.100	7/24/2007 4:35:00 AM
Calcium	253	mg/L		0.100	0.500	7/24/2007 4:35:00 AM
Iron	0.034	mg/L	J	0.0200	0.100	7/24/2007 4:35:00 AM
Magnesium	69.6	mg/L		0.400	0.500	7/24/2007 4:35:00 AM
Potassium	4.94	mg/L		0.300	1.00	7/24/2007 4:35:00 AM
Silicon	0.633	mg/L		0.0100	0.100	7/30/2007 4:48:00 PM
Sodium	3.86	mg/L		0.100	0.500	7/30/2007 1:43:00 PM
Zinc	0.064	mg/L		0.0030	0.050	7/30/2007 1:43:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0002	mg/L	J	0.00020	0.0010	7/20/2007 2:16:11 PM
Arsenic	0.0012	mg/L	J	0.00100	0.0050	7/20/2007 2:16:11 PM
Barium	0.0185	mg/L		0.00100	0.0050	7/20/2007 2:16:11 PM
Beryllium	0.0003	mg/L	J	0.00020	0.0010	7/24/2007 3:55:32 PM
Cadmium	0.0007	mg/L	J	0.00020	0.0010	7/20/2007 2:16:11 PM
Chromium	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 2:16:11 PM
Cobalt	0.0498	mg/L		0.00100	0.0050	7/20/2007 2:16:11 PM
Copper	0.0022	mg/L	J	0.00100	0.0050	7/20/2007 2:16:11 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 2:16:11 PM
Manganese	0.974	mg/L		0.00100	0.0100	7/20/2007 2:16:11 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 2:16:11 PM
Nickel	0.135	mg/L		0.00200	0.0100	7/20/2007 2:16:11 PM
Selenium	0.0069	mg/L		0.00100	0.0050	7/20/2007 2:16:11 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:16:11 PM
Strontium	0.665	mg/L		0.00100	0.0050	7/20/2007 2:16:11 PM
Thallium	0.0003	mg/L	J	0.00020	0.0010	7/20/2007 2:16:11 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 2:16:11 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-03
Client Sample ID:	SM-2 UP ELKH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 1:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0002	mg/L	J	0.00020	0.0010	7/20/2007 2:10:24 PM
Arsenic	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:10:24 PM
Barium	0.0186	mg/L		0.00100	0.0050	7/20/2007 2:10:24 PM
Beryllium	0.0003	mg/L	J	0.00020	0.0010	7/24/2007 3:38:08 PM
Cadmium	0.0007	mg/L	J	0.00020	0.0010	7/20/2007 2:10:24 PM
Chromium	0.0015	mg/L	J	0.00100	0.0050	7/20/2007 2:10:24 PM
Cobalt	0.0500	mg/L		0.00100	0.0050	7/20/2007 2:10:24 PM
Copper	0.0023	mg/L	J	0.00100	0.0050	7/20/2007 2:10:24 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 2:10:24 PM
Manganese	0.979	mg/L		0.00100	0.0100	7/20/2007 2:10:24 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 2:10:24 PM
Nickel	0.136	mg/L		0.00200	0.0100	7/20/2007 2:10:24 PM
Selenium	0.0070	mg/L		0.00100	0.0050	7/20/2007 2:10:24 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:10:24 PM
Strontium	0.659	mg/L		0.00100	0.0050	7/20/2007 2:10:24 PM
Thallium	0.0003	mg/L	J	0.00020	0.0010	7/20/2007 2:10:24 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 2:10:24 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:17:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:16:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 11:18:46 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 5:00:20 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 5:00:20 PM
Surr: o-Terphenyl	89.2	%REC			30-130	7/26/2007 5:00:20 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 5:19:48 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00072	0.0108	7/26/2007 3:06:00 PM
Acenaphthylene	ND	mg/L		0.00103	0.0108	7/26/2007 3:06:00 PM
Anthracene	ND	mg/L		0.00134	0.0108	7/26/2007 3:06:00 PM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-03
Client Sample ID:	SM-2 UP ELKH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 1:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00077	0.0108	7/26/2007 3:06:00 PM
Benzo(a)anthracene	ND	mg/L		0.00099	0.0108	7/26/2007 3:06:00 PM
Benzo(a)pyrene	ND	mg/L		0.00128	0.0108	7/26/2007 3:06:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00157	0.0108	7/26/2007 3:06:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00204	0.0108	7/26/2007 3:06:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00137	0.0108	7/26/2007 3:06:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00074	0.0108	7/26/2007 3:06:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00097	0.0108	7/26/2007 3:06:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00098	0.0108	7/26/2007 3:06:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00647	0.0108	7/26/2007 3:06:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00123	0.0108	7/26/2007 3:06:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00340	0.0108	7/26/2007 3:06:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00162	0.0108	7/26/2007 3:06:00 PM
2-Chloronaphthalene	ND	mg/L		0.00105	0.0108	7/26/2007 3:06:00 PM
2-Chlorophenol	ND	mg/L		0.00127	0.0108	7/26/2007 3:06:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00077	0.0108	7/26/2007 3:06:00 PM
Chrysene	ND	mg/L		0.00078	0.0108	7/26/2007 3:06:00 PM
o-Cresol	ND	mg/L		0.00103	0.0108	7/26/2007 3:06:00 PM
m,p-Cresol	ND	mg/L		0.00190	0.0216	7/26/2007 3:06:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00144	0.0108	7/26/2007 3:06:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00324	0.0108	7/26/2007 3:06:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00082	0.0108	7/26/2007 3:06:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00087	0.0108	7/26/2007 3:06:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00090	0.0108	7/26/2007 3:06:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00207	0.0108	7/26/2007 3:06:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00134	0.0108	7/26/2007 3:06:00 PM
Diethyl phthalate	ND	mg/L		0.00251	0.0108	7/26/2007 3:06:00 PM
Dimethyl phthalate	ND	mg/L		0.00274	0.0108	7/26/2007 3:06:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00155	0.0108	7/26/2007 3:06:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00241	0.0108	7/26/2007 3:06:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00206	0.0108	7/26/2007 3:06:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00198	0.0108	7/26/2007 3:06:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00202	0.0108	7/26/2007 3:06:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00208	0.0108	7/26/2007 3:06:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00094	0.0108	7/26/2007 3:06:00 PM
Fluoranthene	ND	mg/L		0.00169	0.0108	7/26/2007 3:06:00 PM
Fluorene	ND	mg/L		0.00082	0.0108	7/26/2007 3:06:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-03
Client Sample ID:	SM-2 UP ELKH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 1:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00098	0.0108	7/26/2007 3:06:00 PM
Hexachlorobutadiene	ND	mg/L		0.00124	0.0108	7/26/2007 3:06:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00212	0.0108	7/26/2007 3:06:00 PM
Hexachloroethane	ND	mg/L		0.00102	0.0108	7/26/2007 3:06:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00211	0.0108	7/26/2007 3:06:00 PM
Isophorone	ND	mg/L		0.00088	0.0108	7/26/2007 3:06:00 PM
Naphthalene	ND	mg/L		0.00067	0.0108	7/26/2007 3:06:00 PM
Nitrobenzene	ND	mg/L		0.00120	0.0108	7/26/2007 3:06:00 PM
2-Nitrophenol	ND	mg/L		0.00246	0.0108	7/26/2007 3:06:00 PM
4-Nitrophenol	ND	mg/L		0.00160	0.0108	7/26/2007 3:06:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00143	0.0108	7/26/2007 3:06:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00110	0.0108	7/26/2007 3:06:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00108	0.0108	7/26/2007 3:06:00 PM
Pentachlorophenol	ND	mg/L		0.00211	0.0108	7/26/2007 3:06:00 PM
Phenanthrene	ND	mg/L		0.00094	0.0108	7/26/2007 3:06:00 PM
Phenol	ND	mg/L		0.00103	0.0108	7/26/2007 3:06:00 PM
Pyrene	ND	mg/L		0.00128	0.0108	7/26/2007 3:06:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00105	0.0108	7/26/2007 3:06:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00212	0.0108	7/26/2007 3:06:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00198	0.0108	7/26/2007 3:06:00 PM
Surr: 2-Fluorophenol	50.1	%REC			21-110	7/26/2007 3:06:00 PM
Surr: Phenol-d5	35.7	%REC			10-110	7/26/2007 3:06:00 PM
Surr: 2,4,6-Tribromophenol	79.4	%REC			10-123	7/26/2007 3:06:00 PM
Surr: Nitrobenzene-d5	84.0	%REC			35-114	7/26/2007 3:06:00 PM
Surr: 2-Fluorobiphenyl	71.5	%REC			43-116	7/26/2007 3:06:00 PM
Surr: 4-Terphenyl-d14	96.3	%REC			33-141	7/26/2007 3:06:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 3:06:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	10.1	µg/L	J	4.88	20.0	7/20/2007 11:54:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 11:54:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 11:54:00 AM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 11:54:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 11:54:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 11:54:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 11:54:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 11:54:00 AM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-03
Client Sample ID:	SM-2 UP ELKH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 1:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 11:54:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 11:54:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 11:54:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 11:54:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 11:54:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 11:54:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 11:54:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 11:54:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 11:54:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 11:54:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 11:54:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 11:54:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 11:54:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 11:54:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 11:54:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 11:54:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 11:54:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 11:54:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 11:54:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 11:54:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 11:54:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 11:54:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 11:54:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 11:54:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 11:54:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 11:54:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 11:54:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 11:54:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 11:54:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 11:54:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 11:54:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 11:54:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 11:54:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 11:54:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 11:54:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 11:54:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 11:54:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-03
Client Sample ID:	SM-2 UP ELKH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 1:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 11:54:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 11:54:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 11:54:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 11:54:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 11:54:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 11:54:00 AM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 11:54:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 11:54:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 11:54:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 11:54:00 AM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 11:54:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 11:54:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 11:54:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 11:54:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 11:54:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 11:54:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 11:54:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 11:54:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 11:54:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 11:54:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 11:54:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 11:54:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 11:54:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 11:54:00 AM
Surr: 1,2-Dichloroethane-d4	108	%REC			80-120	7/20/2007 11:54:00 AM
Surr: 4-Bromofluorobenzene	95.4	%REC			86-115	7/20/2007 11:54:00 AM
Surr: Dibromofluoromethane	105	%REC			80-120	7/20/2007 11:54:00 AM
Surr: Toluene-d8	103	%REC			88-110	7/20/2007 11:54:00 AM
TIC: 2-methylfuran	2.5	µg/L		NA	NA	7/20/2007 11:54:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **BS**
Iron Related Bacteria	2,550	CFU/mL		NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **BS**
Sulfate Reducing Bacteria	5,500	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-03
Client Sample ID:	SM-2 UP ELKH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 1:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.29	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	0.42	mg/L	J	0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	1.63	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.08	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	932	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.16	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,690	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,180	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	5	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	8.1	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	18.9	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	18.9	mg/L		1.00	1.0	7/23/2007 10:45:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.64	SU		0	NA	7/23/2007 10:45:00 AM

Key:				
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-04
Client Sample ID:	SM-3 IMPOUNDM	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:10:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.173	mg/L		0.0200	0.100	7/24/2007 5:04:00 AM
Calcium	47.3	mg/L		0.100	0.500	7/24/2007 5:04:00 AM
Iron	0.084	mg/L	J	0.0200	0.100	7/24/2007 5:04:00 AM
Magnesium	18.4	mg/L		0.400	0.500	7/24/2007 5:04:00 AM
Potassium	2.97	mg/L		0.300	1.00	7/24/2007 5:04:00 AM
Silicon	3.22	mg/L		0.0100	0.100	7/30/2007 4:57:00 PM
Sodium	59.4	mg/L		0.100	0.500	7/30/2007 2:01:00 PM
Zinc	0.007	mg/L	J	0.0030	0.050	7/30/2007 2:01:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.220	mg/L		0.0200	0.100	7/24/2007 4:59:00 AM
Calcium	48.6	mg/L		0.100	0.500	7/24/2007 4:59:00 AM
Iron	0.223	mg/L		0.0200	0.100	7/24/2007 4:59:00 AM
Magnesium	18.6	mg/L		0.400	0.500	7/24/2007 4:59:00 AM
Potassium	3.01	mg/L		0.300	1.00	7/24/2007 4:59:00 AM
Silicon	3.21	mg/L		0.0100	0.100	7/30/2007 4:56:00 PM
Sodium	59.8	mg/L		0.100	0.500	7/30/2007 1:55:00 PM
Zinc	0.018	mg/L	J	0.0030	0.050	7/30/2007 1:55:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 2:27:42 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/20/2007 2:27:42 PM
Barium	0.0638	mg/L		0.00100	0.0050	7/20/2007 2:27:42 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:07:09 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:27:42 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:27:42 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:27:42 PM
Copper	0.0023	mg/L	J	0.00100	0.0050	7/20/2007 2:27:42 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 2:27:42 PM
Manganese	0.0263	mg/L		0.00100	0.0100	7/20/2007 2:27:42 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 2:27:42 PM
Nickel	0.0031	mg/L	J	0.00200	0.0100	7/20/2007 2:27:42 PM
Selenium	0.0020	mg/L	J	0.00100	0.0050	7/20/2007 2:27:42 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:27:42 PM
Strontium	1.09	mg/L		0.00100	0.0050	7/20/2007 2:27:42 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:27:42 PM
Vanadium	0.0017	mg/L	J	0.00100	0.0100	7/20/2007 2:27:42 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-04
Client Sample ID:	SM-3 IMPOUNDM	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:10:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 2:21:55 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/20/2007 2:21:55 PM
Barium	0.0642	mg/L		0.00100	0.0050	7/20/2007 2:21:55 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:01:21 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:21:55 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:21:55 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:21:55 PM
Copper	0.0018	mg/L	J	0.00100	0.0050	7/20/2007 2:21:55 PM
Lead	0.0003	mg/L	J	0.00020	0.0010	7/20/2007 2:21:55 PM
Manganese	0.0308	mg/L		0.00100	0.0100	7/20/2007 2:21:55 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 2:21:55 PM
Nickel	0.0025	mg/L	J	0.00200	0.0100	7/20/2007 2:21:55 PM
Selenium	0.0019	mg/L	J	0.00100	0.0050	7/20/2007 2:21:55 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:21:55 PM
Strontium	1.09	mg/L		0.00100	0.0050	7/20/2007 2:21:55 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:21:55 PM
Vanadium	0.0017	mg/L	J	0.00100	0.0100	7/20/2007 2:21:55 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:20:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:19:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 11:31:19 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 5:34:20 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 5:34:20 PM
Surr: o-Terphenyl	89.2	%REC			30-130	7/26/2007 5:34:20 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 5:52:06 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00071	0.0106	7/26/2007 3:31:00 PM
Acenaphthylene	ND	mg/L		0.00101	0.0106	7/26/2007 3:31:00 PM
Anthracene	ND	mg/L		0.00132	0.0106	7/26/2007 3:31:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-04
Client Sample ID:	SM-3 IMPOUNDM	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:10:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00076	0.0106	7/26/2007 3:31:00 PM
Benzo(a)anthracene	ND	mg/L		0.00097	0.0106	7/26/2007 3:31:00 PM
Benzo(a)pyrene	ND	mg/L		0.00126	0.0106	7/26/2007 3:31:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00155	0.0106	7/26/2007 3:31:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00200	0.0106	7/26/2007 3:31:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00134	0.0106	7/26/2007 3:31:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00073	0.0106	7/26/2007 3:31:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00095	0.0106	7/26/2007 3:31:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00097	0.0106	7/26/2007 3:31:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00637	0.0106	7/26/2007 3:31:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00121	0.0106	7/26/2007 3:31:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00335	0.0106	7/26/2007 3:31:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00159	0.0106	7/26/2007 3:31:00 PM
2-Chloronaphthalene	ND	mg/L		0.00103	0.0106	7/26/2007 3:31:00 PM
2-Chlorophenol	ND	mg/L		0.00125	0.0106	7/26/2007 3:31:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0106	7/26/2007 3:31:00 PM
Chrysene	ND	mg/L		0.00077	0.0106	7/26/2007 3:31:00 PM
o-Cresol	ND	mg/L		0.00101	0.0106	7/26/2007 3:31:00 PM
m,p-Cresol	ND	mg/L		0.00187	0.0212	7/26/2007 3:31:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00141	0.0106	7/26/2007 3:31:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00318	0.0106	7/26/2007 3:31:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00080	0.0106	7/26/2007 3:31:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00085	0.0106	7/26/2007 3:31:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00089	0.0106	7/26/2007 3:31:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00204	0.0106	7/26/2007 3:31:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00132	0.0106	7/26/2007 3:31:00 PM
Diethyl phthalate	ND	mg/L		0.00247	0.0106	7/26/2007 3:31:00 PM
Dimethyl phthalate	ND	mg/L		0.00270	0.0106	7/26/2007 3:31:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00152	0.0106	7/26/2007 3:31:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00237	0.0106	7/26/2007 3:31:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0106	7/26/2007 3:31:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00195	0.0106	7/26/2007 3:31:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00199	0.0106	7/26/2007 3:31:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00204	0.0106	7/26/2007 3:31:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00092	0.0106	7/26/2007 3:31:00 PM
Fluoranthene	ND	mg/L		0.00166	0.0106	7/26/2007 3:31:00 PM
Fluorene	ND	mg/L		0.00081	0.0106	7/26/2007 3:31:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-04
Client Sample ID:	SM-3 IMPOUNDM	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:10:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00096	0.0106	7/26/2007 3:31:00 PM
Hexachlorobutadiene	ND	mg/L		0.00122	0.0106	7/26/2007 3:31:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00208	0.0106	7/26/2007 3:31:00 PM
Hexachloroethane	ND	mg/L		0.00100	0.0106	7/26/2007 3:31:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00207	0.0106	7/26/2007 3:31:00 PM
Isophorone	ND	mg/L		0.00087	0.0106	7/26/2007 3:31:00 PM
Naphthalene	ND	mg/L		0.00066	0.0106	7/26/2007 3:31:00 PM
Nitrobenzene	ND	mg/L		0.00118	0.0106	7/26/2007 3:31:00 PM
2-Nitrophenol	ND	mg/L		0.00242	0.0106	7/26/2007 3:31:00 PM
4-Nitrophenol	ND	mg/L		0.00158	0.0106	7/26/2007 3:31:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00140	0.0106	7/26/2007 3:31:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00108	0.0106	7/26/2007 3:31:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00106	0.0106	7/26/2007 3:31:00 PM
Pentachlorophenol	ND	mg/L		0.00208	0.0106	7/26/2007 3:31:00 PM
Phenanthrene	ND	mg/L		0.00092	0.0106	7/26/2007 3:31:00 PM
Phenol	ND	mg/L		0.00101	0.0106	7/26/2007 3:31:00 PM
Pyrene	ND	mg/L		0.00126	0.0106	7/26/2007 3:31:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00103	0.0106	7/26/2007 3:31:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00208	0.0106	7/26/2007 3:31:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00195	0.0106	7/26/2007 3:31:00 PM
Surr: 2-Fluorophenol	47.6	%REC			21-110	7/26/2007 3:31:00 PM
Surr: Phenol-d5	33.3	%REC			10-110	7/26/2007 3:31:00 PM
Surr: 2,4,6-Tribromophenol	79.8	%REC			10-123	7/26/2007 3:31:00 PM
Surr: Nitrobenzene-d5	82.1	%REC			35-114	7/26/2007 3:31:00 PM
Surr: 2-Fluorobiphenyl	70.5	%REC			43-116	7/26/2007 3:31:00 PM
Surr: 4-Terphenyl-d14	92.7	%REC			33-141	7/26/2007 3:31:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 3:31:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 12:27:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 12:27:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 12:27:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 12:27:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 12:27:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 12:27:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 12:27:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 12:27:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-04
Client Sample ID:	SM-3 IMPOUNDM	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:10:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 12:27:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 12:27:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 12:27:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 12:27:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 12:27:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 12:27:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 12:27:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 12:27:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 12:27:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 12:27:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 12:27:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 12:27:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 12:27:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 12:27:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 12:27:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 12:27:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 12:27:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 12:27:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 12:27:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 12:27:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 12:27:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 12:27:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 12:27:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 12:27:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 12:27:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 12:27:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 12:27:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 12:27:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 12:27:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 12:27:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 12:27:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 12:27:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 12:27:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 12:27:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 12:27:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 12:27:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 12:27:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-04
Client Sample ID:	SM-3 IMPOUNDM	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:10:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 12:27:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 12:27:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 12:27:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 12:27:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 12:27:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 12:27:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 12:27:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 12:27:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 12:27:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 12:27:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 12:27:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 12:27:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 12:27:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 12:27:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 12:27:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 12:27:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 12:27:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 12:27:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 12:27:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 12:27:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 12:27:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 12:27:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 12:27:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 12:27:00 PM
Surr: 1,2-Dichloroethane-d4	108	%REC			80-120	7/20/2007 12:27:00 PM
Surr: 4-Bromofluorobenzene	95.4	%REC			86-115	7/20/2007 12:27:00 PM
Surr: Dibromofluoromethane	106	%REC			80-120	7/20/2007 12:27:00 PM
Surr: Toluene-d8	102	%REC			88-110	7/20/2007 12:27:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 12:27:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-04
Client Sample ID:	SM-3 IMPOUNDM	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:10:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.46	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	2.70	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	5.15	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.10	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	102	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	644	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	362	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	4	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	221	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	2.9	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	224	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	8.14	SU		0	NA	7/23/2007 1:09:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-05
Client Sample ID:	SM-5B (GW1) SHALLOW	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.051	mg/L	J	0.0200	0.100	7/24/2007 5:16:00 AM
Calcium	2.53	mg/L		0.100	0.500	7/24/2007 5:16:00 AM
Iron	0.037	mg/L	J	0.0200	0.100	7/24/2007 5:16:00 AM
Magnesium	0.805	mg/L		0.400	0.500	7/24/2007 5:16:00 AM
Potassium	2.37	mg/L		0.300	1.00	7/24/2007 5:16:00 AM
Silicon	0.175	mg/L		0.0100	0.100	7/30/2007 5:01:00 PM
Sodium	40.6	mg/L		0.100	0.500	7/30/2007 2:13:00 PM
Zinc	0.168	mg/L		0.0030	0.050	7/30/2007 2:13:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.094	mg/L	J	0.0200	0.100	7/24/2007 5:10:00 AM
Calcium	3.15	mg/L		0.100	0.500	7/24/2007 5:10:00 AM
Iron	0.520	mg/L		0.0200	0.100	7/24/2007 5:10:00 AM
Magnesium	0.943	mg/L		0.400	0.500	7/24/2007 5:10:00 AM
Potassium	2.36	mg/L		0.300	1.00	7/24/2007 5:10:00 AM
Silicon	0.503	mg/L		0.0100	0.100	7/30/2007 4:59:00 PM
Sodium	39.6	mg/L		0.100	0.500	7/30/2007 2:07:00 PM
Zinc	20.1	mg/L		0.0030	0.050	7/30/2007 2:07:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 2:39:16 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/20/2007 2:39:16 PM
Barium	0.0737	mg/L		0.00100	0.0050	7/20/2007 2:39:16 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:18:47 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:39:16 PM
Chromium	0.0015	mg/L	J	0.00100	0.0050	7/20/2007 2:39:16 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:39:16 PM
Copper	0.0017	mg/L	J	0.00100	0.0050	7/20/2007 2:39:16 PM
Lead	0.0028	mg/L		0.00020	0.0010	7/20/2007 2:39:16 PM
Manganese	0.0065	mg/L	J	0.00100	0.0100	7/20/2007 2:39:16 PM
Molybdenum	0.0442	mg/L		0.00100	0.0050	7/20/2007 2:39:16 PM
Nickel	ND	mg/L		0.00200	0.0100	7/20/2007 2:39:16 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 2:39:16 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:39:16 PM
Strontium	0.0395	mg/L		0.00100	0.0050	7/20/2007 2:39:16 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:39:16 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 2:39:16 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-05
Client Sample ID:	SM-5B (GW1) SHALLOW	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0002	mg/L	J	0.00020	0.0010	7/20/2007 2:33:29 PM
Arsenic	0.0030	mg/L	J	0.00100	0.0050	7/20/2007 2:33:29 PM
Barium	0.0993	mg/L		0.00100	0.0050	7/20/2007 2:33:29 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:12:58 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:33:29 PM
Chromium	0.0016	mg/L	J	0.00100	0.0050	7/20/2007 2:33:29 PM
Cobalt	0.0057	mg/L		0.00100	0.0050	7/20/2007 2:33:29 PM
Copper	0.0030	mg/L	J	0.00100	0.0050	7/20/2007 2:33:29 PM
Lead	0.0759	mg/L		0.00020	0.0010	7/20/2007 2:33:29 PM
Manganese	0.0188	mg/L		0.00100	0.0100	7/20/2007 2:33:29 PM
Molybdenum	0.0385	mg/L		0.00100	0.0050	7/20/2007 2:33:29 PM
Nickel	0.0051	mg/L	J	0.00200	0.0100	7/20/2007 2:33:29 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 2:33:29 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:33:29 PM
Strontium	0.0436	mg/L		0.00100	0.0050	7/20/2007 2:33:29 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:33:29 PM
Vanadium	0.0017	mg/L	J	0.00100	0.0100	7/20/2007 2:33:29 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:23:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:21:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 11:43:54 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	0.15	mg/L		0.044	0.10	7/26/2007 6:08:18 PM
TPH (Oil Range)	0.37	mg/L		0.046	0.25	7/26/2007 6:08:18 PM
Surr: o-Terphenyl	91.5	%REC			30-130	7/26/2007 6:08:18 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 7:28:50 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00072	0.0108	7/26/2007 3:57:00 PM
Acenaphthylene	ND	mg/L		0.00102	0.0108	7/26/2007 3:57:00 PM
Anthracene	ND	mg/L		0.00133	0.0108	7/26/2007 3:57:00 PM

Key:

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: SM-5B (GW1) SHALLOW
Project: CS STUDY
Site ID: WV

WorkOrder: 0707930 **Lab ID** 0707930-05
DateReceived: 7/18/2007
Collection Date: 7/17/2007 12:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00077	0.0108	7/26/2007 3:57:00 PM
Benzo(a)anthracene	ND	mg/L		0.00099	0.0108	7/26/2007 3:57:00 PM
Benzo(a)pyrene	ND	mg/L		0.00128	0.0108	7/26/2007 3:57:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00157	0.0108	7/26/2007 3:57:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00203	0.0108	7/26/2007 3:57:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00136	0.0108	7/26/2007 3:57:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00074	0.0108	7/26/2007 3:57:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00096	0.0108	7/26/2007 3:57:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00098	0.0108	7/26/2007 3:57:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00645	0.0108	7/26/2007 3:57:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00123	0.0108	7/26/2007 3:57:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00339	0.0108	7/26/2007 3:57:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00161	0.0108	7/26/2007 3:57:00 PM
2-Chloronaphthalene	ND	mg/L		0.00105	0.0108	7/26/2007 3:57:00 PM
2-Chlorophenol	ND	mg/L		0.00126	0.0108	7/26/2007 3:57:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00077	0.0108	7/26/2007 3:57:00 PM
Chrysene	ND	mg/L		0.00078	0.0108	7/26/2007 3:57:00 PM
o-Cresol	ND	mg/L		0.00103	0.0108	7/26/2007 3:57:00 PM
m,p-Cresol	ND	mg/L		0.00190	0.0215	7/26/2007 3:57:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00143	0.0108	7/26/2007 3:57:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00323	0.0108	7/26/2007 3:57:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00081	0.0108	7/26/2007 3:57:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00086	0.0108	7/26/2007 3:57:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00090	0.0108	7/26/2007 3:57:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00207	0.0108	7/26/2007 3:57:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00134	0.0108	7/26/2007 3:57:00 PM
Diethyl phthalate	ND	mg/L		0.00250	0.0108	7/26/2007 3:57:00 PM
Dimethyl phthalate	ND	mg/L		0.00274	0.0108	7/26/2007 3:57:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00154	0.0108	7/26/2007 3:57:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00240	0.0108	7/26/2007 3:57:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00206	0.0108	7/26/2007 3:57:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00198	0.0108	7/26/2007 3:57:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00201	0.0108	7/26/2007 3:57:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00207	0.0108	7/26/2007 3:57:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00093	0.0108	7/26/2007 3:57:00 PM
Fluoranthene	ND	mg/L		0.00168	0.0108	7/26/2007 3:57:00 PM
Fluorene	ND	mg/L		0.00082	0.0108	7/26/2007 3:57:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-05
Client Sample ID:	SM-5B (GW1) SHALLOW	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00098	0.0108	7/26/2007 3:57:00 PM
Hexachlorobutadiene	ND	mg/L		0.00124	0.0108	7/26/2007 3:57:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00211	0.0108	7/26/2007 3:57:00 PM
Hexachloroethane	ND	mg/L		0.00102	0.0108	7/26/2007 3:57:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00210	0.0108	7/26/2007 3:57:00 PM
Isophorone	ND	mg/L		0.00088	0.0108	7/26/2007 3:57:00 PM
Naphthalene	ND	mg/L		0.00067	0.0108	7/26/2007 3:57:00 PM
Nitrobenzene	ND	mg/L		0.00120	0.0108	7/26/2007 3:57:00 PM
2-Nitrophenol	ND	mg/L		0.00245	0.0108	7/26/2007 3:57:00 PM
4-Nitrophenol	ND	mg/L		0.00160	0.0108	7/26/2007 3:57:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00142	0.0108	7/26/2007 3:57:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00110	0.0108	7/26/2007 3:57:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00108	0.0108	7/26/2007 3:57:00 PM
Pentachlorophenol	ND	mg/L		0.00211	0.0108	7/26/2007 3:57:00 PM
Phenanthrene	ND	mg/L		0.00093	0.0108	7/26/2007 3:57:00 PM
Phenol	ND	mg/L		0.00102	0.0108	7/26/2007 3:57:00 PM
Pyrene	ND	mg/L		0.00127	0.0108	7/26/2007 3:57:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00105	0.0108	7/26/2007 3:57:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00211	0.0108	7/26/2007 3:57:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00198	0.0108	7/26/2007 3:57:00 PM
Surr: 2-Fluorophenol	46.4	%REC			21-110	7/26/2007 3:57:00 PM
Surr: Phenol-d5	32.8	%REC			10-110	7/26/2007 3:57:00 PM
Surr: 2,4,6-Tribromophenol	75.4	%REC			10-123	7/26/2007 3:57:00 PM
Surr: Nitrobenzene-d5	80.0	%REC			35-114	7/26/2007 3:57:00 PM
Surr: 2-Fluorobiphenyl	68.3	%REC			43-116	7/26/2007 3:57:00 PM
Surr: 4-Terphenyl-d14	94.6	%REC			33-141	7/26/2007 3:57:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 3:57:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 1:00:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 1:00:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 1:00:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 1:00:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 1:00:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 1:00:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 1:00:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 1:00:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-05
Client Sample ID:	SM-5B (GW1) SHALLOW	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 1:00:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 1:00:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 1:00:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 1:00:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 1:00:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 1:00:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 1:00:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 1:00:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 1:00:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 1:00:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 1:00:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 1:00:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 1:00:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 1:00:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 1:00:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 1:00:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 1:00:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 1:00:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 1:00:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 1:00:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 1:00:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 1:00:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 1:00:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 1:00:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 1:00:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 1:00:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 1:00:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 1:00:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 1:00:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 1:00:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 1:00:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 1:00:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 1:00:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 1:00:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 1:00:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 1:00:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 1:00:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: SM-5B (GW1) SHALLOW
Project: CS STUDY
Site ID: WV

WorkOrder: 0707930 **Lab ID** 0707930-05
DateReceived: 7/18/2007
Collection Date: 7/17/2007 12:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 1:00:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 1:00:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 1:00:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 1:00:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 1:00:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 1:00:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 1:00:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 1:00:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 1:00:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 1:00:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 1:00:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 1:00:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 1:00:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 1:00:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 1:00:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 1:00:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 1:00:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 1:00:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 1:00:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 1:00:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 1:00:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 1:00:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 1:00:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 1:00:00 PM
Surr: 1,2-Dichloroethane-d4	105	%REC			80-120	7/20/2007 1:00:00 PM
Surr: 4-Bromofluorobenzene	98.7	%REC			86-115	7/20/2007 1:00:00 PM
Surr: Dibromofluoromethane	104	%REC			80-120	7/20/2007 1:00:00 PM
Surr: Toluene-d8	102	%REC			88-110	7/20/2007 1:00:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 1:00:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.21	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	1.04	mg/L		0.050	0.50	7/19/2007 9:39:00 AM

Key:

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MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-05
Client Sample ID:	SM-5B (GW1) SHALLOW	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	6.24	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.13	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	10.2	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.47	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	228	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	117	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	167	mg/L		1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	61.2	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	26.9	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	90.5	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	9.67	SU		0	NA	7/23/2007 1:09:00 PM

Key:					
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-06
Client Sample ID:	SM-5A (GW1) DEEP	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 5:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.075	mg/L	J	0.0200	0.100	7/24/2007 5:27:00 AM
Calcium	1.79	mg/L		0.100	0.500	7/24/2007 5:27:00 AM
Iron	0.069	mg/L	J	0.0200	0.100	7/24/2007 5:27:00 AM
Magnesium	0.745	mg/L		0.400	0.500	7/24/2007 5:27:00 AM
Potassium	2.42	mg/L		0.300	1.00	7/24/2007 5:27:00 AM
Silicon	0.265	mg/L		0.0100	0.100	7/30/2007 5:05:00 PM
Sodium	49.2	mg/L		0.100	0.500	7/30/2007 2:24:00 PM
Zinc	0.206	mg/L		0.0030	0.050	7/30/2007 2:24:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.523	mg/L		0.0200	0.100	7/24/2007 5:22:00 AM
Calcium	4.70	mg/L		0.100	0.500	7/24/2007 5:22:00 AM
Iron	2.75	mg/L		0.0200	0.100	7/24/2007 5:22:00 AM
Magnesium	1.06	mg/L		0.400	0.500	7/24/2007 5:22:00 AM
Potassium	2.74	mg/L		0.300	1.00	7/24/2007 5:22:00 AM
Silicon	0.710	mg/L		0.0100	0.100	7/30/2007 5:03:00 PM
Sodium	50.5	mg/L		0.100	0.500	7/30/2007 2:19:00 PM
Zinc	80.4	mg/L		0.0030	0.050	7/30/2007 2:19:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0005	mg/L	J	0.00020	0.0010	7/20/2007 2:50:52 PM
Arsenic	0.0011	mg/L	J	0.00100	0.0050	7/20/2007 2:50:52 PM
Barium	0.0488	mg/L		0.00100	0.0050	7/20/2007 2:50:52 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:30:28 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:50:52 PM
Chromium	0.0016	mg/L	J	0.00100	0.0050	7/20/2007 2:50:52 PM
Cobalt	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 2:50:52 PM
Copper	0.0042	mg/L	J	0.00100	0.0050	7/20/2007 2:50:52 PM
Lead	0.0022	mg/L		0.00020	0.0010	7/20/2007 2:50:52 PM
Manganese	0.0060	mg/L	J	0.00100	0.0100	7/20/2007 2:50:52 PM
Molybdenum	0.0589	mg/L		0.00100	0.0050	7/20/2007 2:50:52 PM
Nickel	0.0064	mg/L	J	0.00200	0.0100	7/20/2007 2:50:52 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 2:50:52 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:50:52 PM
Strontium	0.0319	mg/L		0.00100	0.0050	7/20/2007 2:50:52 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:50:52 PM
Vanadium	0.0017	mg/L	J	0.00100	0.0100	7/20/2007 2:50:52 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-06
Client Sample ID:	SM-5A (GW1) DEEP	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 5:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0004	mg/L	J	0.00020	0.0010	7/20/2007 2:45:04 PM
Arsenic	0.0039	mg/L	J	0.00100	0.0050	7/20/2007 2:45:04 PM
Barium	0.0969	mg/L		0.00100	0.0050	7/20/2007 2:45:04 PM
Beryllium	0.0003	mg/L	J	0.00020	0.0010	7/24/2007 4:24:37 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:45:04 PM
Chromium	0.0024	mg/L	J	0.00100	0.0050	7/20/2007 2:45:04 PM
Cobalt	0.0072	mg/L		0.00100	0.0050	7/20/2007 2:45:04 PM
Copper	0.0053	mg/L		0.00100	0.0050	7/20/2007 2:45:04 PM
Lead	0.0711	mg/L		0.00020	0.0010	7/20/2007 2:45:04 PM
Manganese	0.114	mg/L		0.00100	0.0100	7/20/2007 2:45:04 PM
Molybdenum	0.0439	mg/L		0.00100	0.0050	7/20/2007 2:45:04 PM
Nickel	0.0101	mg/L		0.00200	0.0100	7/20/2007 2:45:04 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 2:45:04 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:45:04 PM
Strontium	0.0478	mg/L		0.00100	0.0050	7/20/2007 2:45:04 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:45:04 PM
Vanadium	0.0019	mg/L	J	0.00100	0.0100	7/20/2007 2:45:04 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:25:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:24:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 11:56:29 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	0.71	mg/L		0.044	0.10	7/26/2007 6:42:09 PM
TPH (Oil Range)	1.81	mg/L		0.046	0.25	7/26/2007 6:42:09 PM
Surr: o-Terphenyl	95.7	%REC			30-130	7/26/2007 6:42:09 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 8:01:12 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00071	0.0106	7/26/2007 4:23:00 PM
Acenaphthylene	ND	mg/L		0.00101	0.0106	7/26/2007 4:23:00 PM
Anthracene	ND	mg/L		0.00132	0.0106	7/26/2007 4:23:00 PM

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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-06
Client Sample ID:	SM-5A (GW1) DEEP	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 5:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00076	0.0106	7/26/2007 4:23:00 PM
Benzo(a)anthracene	ND	mg/L		0.00098	0.0106	7/26/2007 4:23:00 PM
Benzo(a)pyrene	ND	mg/L		0.00126	0.0106	7/26/2007 4:23:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00155	0.0106	7/26/2007 4:23:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00201	0.0106	7/26/2007 4:23:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00135	0.0106	7/26/2007 4:23:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00073	0.0106	7/26/2007 4:23:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00095	0.0106	7/26/2007 4:23:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00097	0.0106	7/26/2007 4:23:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00638	0.0106	7/26/2007 4:23:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00122	0.0106	7/26/2007 4:23:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00335	0.0106	7/26/2007 4:23:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00159	0.0106	7/26/2007 4:23:00 PM
2-Chloronaphthalene	ND	mg/L		0.00103	0.0106	7/26/2007 4:23:00 PM
2-Chlorophenol	ND	mg/L		0.00125	0.0106	7/26/2007 4:23:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0106	7/26/2007 4:23:00 PM
Chrysene	ND	mg/L		0.00077	0.0106	7/26/2007 4:23:00 PM
o-Cresol	ND	mg/L		0.00101	0.0106	7/26/2007 4:23:00 PM
m,p-Cresol	ND	mg/L		0.00188	0.0213	7/26/2007 4:23:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00142	0.0106	7/26/2007 4:23:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00319	0.0106	7/26/2007 4:23:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00080	0.0106	7/26/2007 4:23:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00085	0.0106	7/26/2007 4:23:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00089	0.0106	7/26/2007 4:23:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00204	0.0106	7/26/2007 4:23:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00132	0.0106	7/26/2007 4:23:00 PM
Diethyl phthalate	0.0056	mg/L	J	0.00247	0.0106	7/26/2007 4:23:00 PM
Dimethyl phthalate	ND	mg/L		0.00270	0.0106	7/26/2007 4:23:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00152	0.0106	7/26/2007 4:23:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00238	0.0106	7/26/2007 4:23:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0106	7/26/2007 4:23:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00195	0.0106	7/26/2007 4:23:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00199	0.0106	7/26/2007 4:23:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00205	0.0106	7/26/2007 4:23:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00092	0.0106	7/26/2007 4:23:00 PM
Fluoranthene	ND	mg/L		0.00166	0.0106	7/26/2007 4:23:00 PM
Fluorene	ND	mg/L		0.00081	0.0106	7/26/2007 4:23:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-06
Client Sample ID:	SM-5A (GW1) DEEP	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 5:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00096	0.0106	7/26/2007 4:23:00 PM
Hexachlorobutadiene	ND	mg/L		0.00122	0.0106	7/26/2007 4:23:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00209	0.0106	7/26/2007 4:23:00 PM
Hexachloroethane	ND	mg/L		0.00100	0.0106	7/26/2007 4:23:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00208	0.0106	7/26/2007 4:23:00 PM
Isophorone	ND	mg/L		0.00087	0.0106	7/26/2007 4:23:00 PM
Naphthalene	ND	mg/L		0.00066	0.0106	7/26/2007 4:23:00 PM
Nitrobenzene	ND	mg/L		0.00118	0.0106	7/26/2007 4:23:00 PM
2-Nitrophenol	ND	mg/L		0.00242	0.0106	7/26/2007 4:23:00 PM
4-Nitrophenol	ND	mg/L		0.00158	0.0106	7/26/2007 4:23:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00140	0.0106	7/26/2007 4:23:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00108	0.0106	7/26/2007 4:23:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00107	0.0106	7/26/2007 4:23:00 PM
Pentachlorophenol	ND	mg/L		0.00208	0.0106	7/26/2007 4:23:00 PM
Phenanthrene	ND	mg/L		0.00092	0.0106	7/26/2007 4:23:00 PM
Phenol	0.0024	mg/L	J	0.00101	0.0106	7/26/2007 4:23:00 PM
Pyrene	ND	mg/L		0.00126	0.0106	7/26/2007 4:23:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00103	0.0106	7/26/2007 4:23:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00209	0.0106	7/26/2007 4:23:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00195	0.0106	7/26/2007 4:23:00 PM
Surr: 2-Fluorophenol	51.9	%REC			21-110	7/26/2007 4:23:00 PM
Surr: Phenol-d5	37.1	%REC			10-110	7/26/2007 4:23:00 PM
Surr: 2,4,6-Tribromophenol	87.0	%REC			10-123	7/26/2007 4:23:00 PM
Surr: Nitrobenzene-d5	86.8	%REC			35-114	7/26/2007 4:23:00 PM
Surr: 2-Fluorobiphenyl	70.6	%REC			43-116	7/26/2007 4:23:00 PM
Surr: 4-Terphenyl-d14	96.1	%REC			33-141	7/26/2007 4:23:00 PM
TIC: Unknown peak 1	0.0168	mg/L		NA	NA	7/26/2007 4:23:00 PM
TIC: Unknown peak 2	0.0759	mg/L		NA	NA	7/26/2007 4:23:00 PM
TIC: Unknown peak 3	0.115	mg/L		NA	NA	7/26/2007 4:23:00 PM
TIC: Unknown peak 4	0.0599	mg/L		NA	NA	7/26/2007 4:23:00 PM
TIC: Unknown peak 5	0.224	mg/L		NA	NA	7/26/2007 4:23:00 PM

NOTES:

* Insufficient data for tentative identification. The unknown peaks have similar patterns with primary ion 59 and are related to 2-Propanol, 1-(2-methoxy-1-methylethoxy)-.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 10:11:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 10:11:00 AM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-06
Client Sample ID:	SM-5A (GW1) DEEP	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 5:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 10:11:00 AM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 10:11:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 10:11:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 10:11:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 10:11:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 10:11:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 10:11:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 10:11:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 10:11:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 10:11:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 10:11:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 10:11:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 10:11:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 10:11:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 10:11:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 10:11:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 10:11:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 10:11:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 10:11:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 10:11:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 10:11:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 10:11:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 10:11:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 10:11:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 10:11:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 10:11:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 10:11:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 10:11:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 10:11:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 10:11:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 10:11:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 10:11:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 10:11:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 10:11:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 10:11:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 10:11:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 10:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-06
Client Sample ID:	SM-5A (GW1) DEEP	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 5:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 10:11:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 10:11:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 10:11:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 10:11:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 10:11:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 10:11:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 10:11:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 10:11:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 10:11:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 10:11:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 10:11:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 10:11:00 AM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 10:11:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 10:11:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 10:11:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 10:11:00 AM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 10:11:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 10:11:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 10:11:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 10:11:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 10:11:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 10:11:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 10:11:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 10:11:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 10:11:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 10:11:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 10:11:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 10:11:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 10:11:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 10:11:00 AM
Surr: 1,2-Dichloroethane-d4	102	%REC			80-120	7/20/2007 10:11:00 AM
Surr: 4-Bromofluorobenzene	96.8	%REC			86-115	7/20/2007 10:11:00 AM
Surr: Dibromofluoromethane	101	%REC			80-120	7/20/2007 10:11:00 AM
Surr: Toluene-d8	103	%REC			88-110	7/20/2007 10:11:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 10:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-06
Client Sample ID:	SM-5A (GW1) DEEP	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 5:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	ND	CFU/mL		NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	1,000	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.24	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	1.09	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	7.41	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.15	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	11.0	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.47	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	269	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	141	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	316	mg/L		1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	83.4	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	51.8	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	139	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	9.82	SU		0	NA	7/23/2007 1:09:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-07
Client Sample ID:	SM-4 (DOWN) ELK H	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:23:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.182	mg/L		0.0200	0.100	7/24/2007 5:39:00 AM
Calcium	48.8	mg/L		0.100	0.500	7/24/2007 5:39:00 AM
Iron	0.065	mg/L	J	0.0200	0.100	7/24/2007 5:39:00 AM
Magnesium	19.0	mg/L		0.400	0.500	7/24/2007 5:39:00 AM
Potassium	3.24	mg/L		0.300	1.00	7/24/2007 5:39:00 AM
Silicon	3.30	mg/L		0.0100	0.100	7/30/2007 5:09:00 PM
Sodium	55.2	mg/L		0.100	0.500	7/30/2007 2:36:00 PM
Zinc	0.016	mg/L	J	0.0030	0.050	7/30/2007 2:36:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.211	mg/L		0.0200	0.100	7/24/2007 5:33:00 AM
Calcium	49.4	mg/L		0.100	0.500	7/24/2007 5:33:00 AM
Iron	0.108	mg/L		0.0200	0.100	7/24/2007 5:33:00 AM
Magnesium	19.0	mg/L		0.400	0.500	7/24/2007 5:33:00 AM
Potassium	3.01	mg/L		0.300	1.00	7/24/2007 5:33:00 AM
Silicon	3.29	mg/L		0.0100	0.100	7/30/2007 5:07:00 PM
Sodium	55.6	mg/L		0.100	0.500	7/30/2007 2:30:00 PM
Zinc	0.012	mg/L	J	0.0030	0.050	7/30/2007 2:30:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0002	mg/L	J	0.00020	0.0010	7/20/2007 3:13:59 PM
Arsenic	0.0011	mg/L	J	0.00100	0.0050	7/20/2007 3:13:59 PM
Barium	0.0672	mg/L		0.00100	0.0050	7/20/2007 3:13:59 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:42:07 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 3:13:59 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 3:13:59 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 3:13:59 PM
Copper	0.0051	mg/L		0.00100	0.0050	7/20/2007 3:13:59 PM
Lead	0.0014	mg/L		0.00020	0.0010	7/20/2007 3:13:59 PM
Manganese	0.0171	mg/L		0.00100	0.0100	7/20/2007 3:13:59 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 3:13:59 PM
Nickel	0.0042	mg/L	J	0.00200	0.0100	7/20/2007 3:13:59 PM
Selenium	0.0020	mg/L	J	0.00100	0.0050	7/20/2007 3:13:59 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 3:13:59 PM
Strontium	1.15	mg/L		0.00100	0.0050	7/20/2007 3:13:59 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 3:13:59 PM
Vanadium	0.0017	mg/L	J	0.00100	0.0100	7/20/2007 3:13:59 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-07
Client Sample ID:	SM-4 (DOWN) ELK H	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:23:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 2:56:40 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/20/2007 2:56:40 PM
Barium	0.0659	mg/L		0.00100	0.0050	7/20/2007 2:56:40 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:36:18 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 2:56:40 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:56:40 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 2:56:40 PM
Copper	0.0051	mg/L		0.00100	0.0050	7/20/2007 2:56:40 PM
Lead	0.0004	mg/L	J	0.00020	0.0010	7/20/2007 2:56:40 PM
Manganese	0.0183	mg/L		0.00100	0.0100	7/20/2007 2:56:40 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 2:56:40 PM
Nickel	0.0025	mg/L	J	0.00200	0.0100	7/20/2007 2:56:40 PM
Selenium	0.0020	mg/L	J	0.00100	0.0050	7/20/2007 2:56:40 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 2:56:40 PM
Strontium	1.09	mg/L		0.00100	0.0050	7/20/2007 2:56:40 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 2:56:40 PM
Vanadium	0.0017	mg/L	J	0.00100	0.0100	7/20/2007 2:56:40 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:31:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:29:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 12:08:59 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	0.14	mg/L		0.044	0.10	7/26/2007 7:16:02 PM
TPH (Oil Range)	0.40	mg/L		0.046	0.25	7/26/2007 7:16:02 PM
Surr: o-Terphenyl	96.6	%REC			30-130	7/26/2007 7:16:02 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 8:33:35 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00069	0.0103	7/26/2007 4:49:00 PM
Acenaphthylene	ND	mg/L		0.00098	0.0103	7/26/2007 4:49:00 PM
Anthracene	ND	mg/L		0.00128	0.0103	7/26/2007 4:49:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-07
Client Sample ID:	SM-4 (DOWN) ELK H	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:23:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00074	0.0103	7/26/2007 4:49:00 PM
Benzo(a)anthracene	ND	mg/L		0.00095	0.0103	7/26/2007 4:49:00 PM
Benzo(a)pyrene	ND	mg/L		0.00123	0.0103	7/26/2007 4:49:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00151	0.0103	7/26/2007 4:49:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00195	0.0103	7/26/2007 4:49:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00131	0.0103	7/26/2007 4:49:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00071	0.0103	7/26/2007 4:49:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00093	0.0103	7/26/2007 4:49:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00094	0.0103	7/26/2007 4:49:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00620	0.0103	7/26/2007 4:49:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00118	0.0103	7/26/2007 4:49:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00326	0.0103	7/26/2007 4:49:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00155	0.0103	7/26/2007 4:49:00 PM
2-Chloronaphthalene	ND	mg/L		0.00100	0.0103	7/26/2007 4:49:00 PM
2-Chlorophenol	ND	mg/L		0.00121	0.0103	7/26/2007 4:49:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00074	0.0103	7/26/2007 4:49:00 PM
Chrysene	ND	mg/L		0.00075	0.0103	7/26/2007 4:49:00 PM
o-Cresol	ND	mg/L		0.00099	0.0103	7/26/2007 4:49:00 PM
m,p-Cresol	ND	mg/L		0.00182	0.0207	7/26/2007 4:49:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00138	0.0103	7/26/2007 4:49:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00310	0.0103	7/26/2007 4:49:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00078	0.0103	7/26/2007 4:49:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00083	0.0103	7/26/2007 4:49:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00087	0.0103	7/26/2007 4:49:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00199	0.0103	7/26/2007 4:49:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00129	0.0103	7/26/2007 4:49:00 PM
Diethyl phthalate	ND	mg/L		0.00241	0.0103	7/26/2007 4:49:00 PM
Dimethyl phthalate	ND	mg/L		0.00263	0.0103	7/26/2007 4:49:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00148	0.0103	7/26/2007 4:49:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00231	0.0103	7/26/2007 4:49:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00198	0.0103	7/26/2007 4:49:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00190	0.0103	7/26/2007 4:49:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00193	0.0103	7/26/2007 4:49:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00199	0.0103	7/26/2007 4:49:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00090	0.0103	7/26/2007 4:49:00 PM
Fluoranthene	ND	mg/L		0.00162	0.0103	7/26/2007 4:49:00 PM
Fluorene	ND	mg/L		0.00079	0.0103	7/26/2007 4:49:00 PM

Key:

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT: WV DEP - CHARLESTON **WorkOrder:** 0707930 **Lab ID** 0707930-07
Client Sample ID: SM-4 (DOWN) ELK H **DateReceived:** 7/18/2007
Project: CS STUDY **Collection Date:** 7/17/2007 12:23:00 PM
Site ID: WV **Matrix:** LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00094	0.0103	7/26/2007 4:49:00 PM
Hexachlorobutadiene	ND	mg/L		0.00119	0.0103	7/26/2007 4:49:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00203	0.0103	7/26/2007 4:49:00 PM
Hexachloroethane	ND	mg/L		0.00098	0.0103	7/26/2007 4:49:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00202	0.0103	7/26/2007 4:49:00 PM
Isophorone	ND	mg/L		0.00085	0.0103	7/26/2007 4:49:00 PM
Naphthalene	ND	mg/L		0.00064	0.0103	7/26/2007 4:49:00 PM
Nitrobenzene	ND	mg/L		0.00115	0.0103	7/26/2007 4:49:00 PM
2-Nitrophenol	ND	mg/L		0.00235	0.0103	7/26/2007 4:49:00 PM
4-Nitrophenol	ND	mg/L		0.00154	0.0103	7/26/2007 4:49:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00137	0.0103	7/26/2007 4:49:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00105	0.0103	7/26/2007 4:49:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00104	0.0103	7/26/2007 4:49:00 PM
Pentachlorophenol	ND	mg/L		0.00202	0.0103	7/26/2007 4:49:00 PM
Phenanthrene	ND	mg/L		0.00090	0.0103	7/26/2007 4:49:00 PM
Phenol	ND	mg/L		0.00098	0.0103	7/26/2007 4:49:00 PM
Pyrene	ND	mg/L		0.00122	0.0103	7/26/2007 4:49:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00101	0.0103	7/26/2007 4:49:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00203	0.0103	7/26/2007 4:49:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00190	0.0103	7/26/2007 4:49:00 PM
Surr: 2-Fluorophenol	48.2	%REC			21-110	7/26/2007 4:49:00 PM
Surr: Phenol-d5	33.9	%REC			10-110	7/26/2007 4:49:00 PM
Surr: 2,4,6-Tribromophenol	87.8	%REC			10-123	7/26/2007 4:49:00 PM
Surr: Nitrobenzene-d5	87.4	%REC			35-114	7/26/2007 4:49:00 PM
Surr: 2-Fluorobiphenyl	72.9	%REC			43-116	7/26/2007 4:49:00 PM
Surr: 4-Terphenyl-d14	98.8	%REC			33-141	7/26/2007 4:49:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 4:49:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 1:32:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 1:32:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 1:32:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 1:32:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 1:32:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 1:32:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 1:32:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 1:32:00 PM

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PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-07
Client Sample ID:	SM-4 (DOWN) ELK H	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:23:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 1:32:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 1:32:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 1:32:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 1:32:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 1:32:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 1:32:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 1:32:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 1:32:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 1:32:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 1:32:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 1:32:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 1:32:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 1:32:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 1:32:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 1:32:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 1:32:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 1:32:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 1:32:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 1:32:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 1:32:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 1:32:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 1:32:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 1:32:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 1:32:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 1:32:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 1:32:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 1:32:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 1:32:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 1:32:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 1:32:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 1:32:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 1:32:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 1:32:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 1:32:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 1:32:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 1:32:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 1:32:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-07
Client Sample ID:	SM-4 (DOWN) ELK H	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:23:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 1:32:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 1:32:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 1:32:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 1:32:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 1:32:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 1:32:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 1:32:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 1:32:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 1:32:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 1:32:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 1:32:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 1:32:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 1:32:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 1:32:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 1:32:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 1:32:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 1:32:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 1:32:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 1:32:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 1:32:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 1:32:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 1:32:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 1:32:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 1:32:00 PM
Surr: 1,2-Dichloroethane-d4	102	%REC			80-120	7/20/2007 1:32:00 PM
Surr: 4-Bromofluorobenzene	95.7	%REC			86-115	7/20/2007 1:32:00 PM
Surr: Dibromofluoromethane	106	%REC			80-120	7/20/2007 1:32:00 PM
Surr: Toluene-d8	103	%REC			88-110	7/20/2007 1:32:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 1:32:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM

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	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-07
Client Sample ID:	SM-4 (DOWN) ELK H	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 12:23:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.31	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	2.65	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	4.96	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.10	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	99.4	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	634	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	331	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	9	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	2.9	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	204	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	2.4	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	207	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	8.09	SU		0	NA	7/23/2007 1:09:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-08
Client Sample ID:	SM-IT BIG F TREATED WELL	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.206	mg/L		0.0200	0.100	7/24/2007 6:02:00 AM
Calcium	46.8	mg/L		0.100	0.500	7/24/2007 6:02:00 AM
Iron	0.031	mg/L	J	0.0200	0.100	7/24/2007 6:02:00 AM
Magnesium	16.4	mg/L		0.400	0.500	7/24/2007 6:02:00 AM
Potassium	2.63	mg/L		0.300	1.00	7/24/2007 6:02:00 AM
Silicon	4.86	mg/L		0.0100	0.100	7/30/2007 5:27:00 PM
Sodium	50.0	mg/L		0.100	0.500	7/30/2007 2:59:00 PM
Zinc	0.029	mg/L	J	0.0030	0.050	7/30/2007 2:59:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.202	mg/L		0.0200	0.100	7/24/2007 5:45:00 AM
Calcium	47.5	mg/L		0.100	0.500	7/24/2007 5:45:00 AM
Iron	ND	mg/L		0.0200	0.100	7/24/2007 5:45:00 AM
Magnesium	16.3	mg/L		0.400	0.500	7/24/2007 5:45:00 AM
Potassium	2.62	mg/L		0.300	1.00	7/24/2007 5:45:00 AM
Silicon	4.81	mg/L		0.0100	0.100	7/30/2007 5:11:00 PM
Sodium	50.0	mg/L		0.100	0.500	7/30/2007 2:53:00 PM
Zinc	0.038	mg/L	J	0.0030	0.050	7/30/2007 2:53:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 3:25:34 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/20/2007 3:25:34 PM
Barium	0.0704	mg/L		0.00100	0.0050	7/20/2007 3:25:34 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 5:05:22 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 3:25:34 PM
Chromium	0.0015	mg/L	J	0.00100	0.0050	7/20/2007 3:25:34 PM
Cobalt	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 3:25:34 PM
Copper	0.0262	mg/L		0.00100	0.0050	7/20/2007 3:25:34 PM
Lead	0.0008	mg/L	J	0.00020	0.0010	7/20/2007 3:25:34 PM
Manganese	0.0030	mg/L	J	0.00100	0.0100	7/20/2007 3:25:34 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 3:25:34 PM
Nickel	0.0104	mg/L		0.00200	0.0100	7/20/2007 3:25:34 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 3:25:34 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 3:25:34 PM
Strontium	0.954	mg/L		0.00100	0.0050	7/20/2007 3:25:34 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 3:25:34 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 3:25:34 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-08
Client Sample ID:	SM-IT BIG F TREATED WELL	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 3:19:46 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/20/2007 3:19:46 PM
Barium	0.0717	mg/L		0.00100	0.0050	7/20/2007 3:19:46 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 4:47:58 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 3:19:46 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 3:19:46 PM
Cobalt	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 3:19:46 PM
Copper	0.0128	mg/L		0.00100	0.0050	7/20/2007 3:19:46 PM
Lead	0.0005	mg/L	J	0.00020	0.0010	7/20/2007 3:19:46 PM
Manganese	0.0018	mg/L	J	0.00100	0.0100	7/20/2007 3:19:46 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 3:19:46 PM
Nickel	0.0044	mg/L	J	0.00200	0.0100	7/20/2007 3:19:46 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 3:19:46 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 3:19:46 PM
Strontium	0.920	mg/L		0.00100	0.0050	7/20/2007 3:19:46 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 3:19:46 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 3:19:46 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:33:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:32:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 12:21:34 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 7:49:52 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 7:49:52 PM
Surr: o-Terphenyl	89.0	%REC			30-130	7/26/2007 7:49:52 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 9:05:36 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00071	0.0107	7/26/2007 5:15:00 PM
Acenaphthylene	ND	mg/L		0.00102	0.0107	7/26/2007 5:15:00 PM
Anthracene	ND	mg/L		0.00133	0.0107	7/26/2007 5:15:00 PM

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MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-08
Client Sample ID:	SM-IT BIG F TREATED WELL	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00076	0.0107	7/26/2007 5:15:00 PM
Benzo(a)anthracene	ND	mg/L		0.00099	0.0107	7/26/2007 5:15:00 PM
Benzo(a)pyrene	ND	mg/L		0.00127	0.0107	7/26/2007 5:15:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00157	0.0107	7/26/2007 5:15:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00202	0.0107	7/26/2007 5:15:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00136	0.0107	7/26/2007 5:15:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00074	0.0107	7/26/2007 5:15:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00096	0.0107	7/26/2007 5:15:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00098	0.0107	7/26/2007 5:15:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00644	0.0107	7/26/2007 5:15:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00123	0.0107	7/26/2007 5:15:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00338	0.0107	7/26/2007 5:15:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00161	0.0107	7/26/2007 5:15:00 PM
2-Chloronaphthalene	ND	mg/L		0.00104	0.0107	7/26/2007 5:15:00 PM
2-Chlorophenol	ND	mg/L		0.00126	0.0107	7/26/2007 5:15:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0107	7/26/2007 5:15:00 PM
Chrysene	ND	mg/L		0.00078	0.0107	7/26/2007 5:15:00 PM
o-Cresol	ND	mg/L		0.00102	0.0107	7/26/2007 5:15:00 PM
m,p-Cresol	ND	mg/L		0.00189	0.0215	7/26/2007 5:15:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00143	0.0107	7/26/2007 5:15:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00322	0.0107	7/26/2007 5:15:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00081	0.0107	7/26/2007 5:15:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00086	0.0107	7/26/2007 5:15:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00090	0.0107	7/26/2007 5:15:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00206	0.0107	7/26/2007 5:15:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00134	0.0107	7/26/2007 5:15:00 PM
Diethyl phthalate	ND	mg/L		0.00250	0.0107	7/26/2007 5:15:00 PM
Dimethyl phthalate	ND	mg/L		0.00273	0.0107	7/26/2007 5:15:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00154	0.0107	7/26/2007 5:15:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00240	0.0107	7/26/2007 5:15:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00205	0.0107	7/26/2007 5:15:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00197	0.0107	7/26/2007 5:15:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00201	0.0107	7/26/2007 5:15:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00207	0.0107	7/26/2007 5:15:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00093	0.0107	7/26/2007 5:15:00 PM
Fluoranthene	ND	mg/L		0.00168	0.0107	7/26/2007 5:15:00 PM
Fluorene	ND	mg/L		0.00082	0.0107	7/26/2007 5:15:00 PM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-08
Client Sample ID:	SM-IT BIG F TREATED WELL	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00097	0.0107	7/26/2007 5:15:00 PM
Hexachlorobutadiene	ND	mg/L		0.00123	0.0107	7/26/2007 5:15:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00211	0.0107	7/26/2007 5:15:00 PM
Hexachloroethane	ND	mg/L		0.00101	0.0107	7/26/2007 5:15:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00210	0.0107	7/26/2007 5:15:00 PM
Isophorone	ND	mg/L		0.00088	0.0107	7/26/2007 5:15:00 PM
Naphthalene	ND	mg/L		0.00067	0.0107	7/26/2007 5:15:00 PM
Nitrobenzene	ND	mg/L		0.00119	0.0107	7/26/2007 5:15:00 PM
2-Nitrophenol	ND	mg/L		0.00244	0.0107	7/26/2007 5:15:00 PM
4-Nitrophenol	ND	mg/L		0.00160	0.0107	7/26/2007 5:15:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00142	0.0107	7/26/2007 5:15:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00109	0.0107	7/26/2007 5:15:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00108	0.0107	7/26/2007 5:15:00 PM
Pentachlorophenol	ND	mg/L		0.00210	0.0107	7/26/2007 5:15:00 PM
Phenanthrene	ND	mg/L		0.00093	0.0107	7/26/2007 5:15:00 PM
Phenol	ND	mg/L		0.00102	0.0107	7/26/2007 5:15:00 PM
Pyrene	ND	mg/L		0.00127	0.0107	7/26/2007 5:15:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00104	0.0107	7/26/2007 5:15:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00211	0.0107	7/26/2007 5:15:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00197	0.0107	7/26/2007 5:15:00 PM
Surr: 2-Fluorophenol	22.5	%REC			21-110	7/26/2007 5:15:00 PM
Surr: Phenol-d5	<1	%REC	S		10-110	7/26/2007 5:15:00 PM
Surr: 2,4,6-Tribromophenol	50.6	%REC			10-123	7/26/2007 5:15:00 PM
Surr: Nitrobenzene-d5	88.5	%REC			35-114	7/26/2007 5:15:00 PM
Surr: 2-Fluorobiphenyl	72.9	%REC			43-116	7/26/2007 5:15:00 PM
Surr: 4-Terphenyl-d14	101	%REC			33-141	7/26/2007 5:15:00 PM
TIC: 3H-1,2-Dithiol-3-one, 5-methyl	0.0111	mg/L		NA	NA	7/26/2007 5:15:00 PM
TIC: Butane, 2,3-dichloro-2-methyl-	0.0640	mg/L		NA	NA	7/26/2007 5:15:00 PM
TIC: Propane, 1-ethoxy	0.124	mg/L		NA	NA	7/26/2007 5:15:00 PM
TIC: Propanoic acid, 3-methoxy-, methyl ester	0.0198	mg/L		NA	NA	7/26/2007 5:15:00 PM
TIC: Unidentified peak 1	0.0114	mg/L		NA	NA	7/26/2007 5:15:00 PM

NOTES:

* Insufficient data for tentative identification. Unidentified peak has primary ion 146, secondary ion 63.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 2:05:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 2:05:00 PM

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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-08
Client Sample ID:	SM-IT BIG F TREATED WELL	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 2:05:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 2:05:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 2:05:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 2:05:00 PM
Bromodichloromethane	1.1	µg/L		0.16	1.0	7/20/2007 2:05:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 2:05:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 2:05:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 2:05:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 2:05:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 2:05:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 2:05:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 2:05:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 2:05:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 2:05:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 2:05:00 PM
Chloroform	1.7	µg/L		0.25	1.0	7/20/2007 2:05:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 2:05:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 2:05:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 2:05:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 2:05:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 2:05:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 2:05:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 2:05:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 2:05:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 2:05:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 2:05:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 2:05:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 2:05:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 2:05:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 2:05:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 2:05:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 2:05:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 2:05:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 2:05:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 2:05:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 2:05:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 2:05:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-08
Client Sample ID:	SM-IT BIG F TREATED WELL	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 2:05:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 2:05:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 2:05:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 2:05:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 2:05:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 2:05:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 2:05:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 2:05:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 2:05:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 2:05:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 2:05:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 2:05:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 2:05:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 2:05:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 2:05:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 2:05:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 2:05:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 2:05:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 2:05:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 2:05:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 2:05:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 2:05:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 2:05:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 2:05:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 2:05:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 2:05:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 2:05:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 2:05:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 2:05:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 2:05:00 PM
Surr: 1,2-Dichloroethane-d4	103	%REC			80-120	7/20/2007 2:05:00 PM
Surr: 4-Bromofluorobenzene	90.9	%REC			86-115	7/20/2007 2:05:00 PM
Surr: Dibromofluoromethane	105	%REC			80-120	7/20/2007 2:05:00 PM
Surr: Toluene-d8	91.7	%REC			88-110	7/20/2007 2:05:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 2:05:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-08
Client Sample ID:	SM-IT BIG F TREATED WELL	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	100	CFU/mL	H	NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	ND	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.62	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	3.37	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	13.2	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.11	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	67.8	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	582	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	305	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	3	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	70.1	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	230	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	230	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.71	SU		0	NA	7/23/2007 1:09:00 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-09
Client Sample ID:	SM-1R BIG RAW FOUR	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.200	mg/L		0.0200	0.100	7/24/2007 6:14:00 AM
Calcium	46.6	mg/L		0.100	0.500	7/24/2007 6:14:00 AM
Iron	0.920	mg/L		0.0200	0.100	7/24/2007 6:14:00 AM
Magnesium	17.2	mg/L		0.400	0.500	7/24/2007 6:14:00 AM
Potassium	2.54	mg/L		0.300	1.00	7/24/2007 6:14:00 AM
Silicon	4.96	mg/L		0.0100	0.100	7/30/2007 5:31:00 PM
Sodium	56.9	mg/L		0.100	0.500	7/30/2007 3:10:00 PM
Zinc	0.217	mg/L		0.0030	0.050	7/30/2007 3:10:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.232	mg/L		0.0200	0.100	7/24/2007 6:08:00 AM
Calcium	46.3	mg/L		0.100	0.500	7/24/2007 6:08:00 AM
Iron	2.05	mg/L		0.0200	0.100	7/24/2007 6:08:00 AM
Magnesium	16.9	mg/L		0.400	0.500	7/24/2007 6:08:00 AM
Potassium	2.45	mg/L		0.300	1.00	7/24/2007 6:08:00 AM
Silicon	4.99	mg/L		0.0100	0.100	7/30/2007 5:29:00 PM
Sodium	54.8	mg/L		0.100	0.500	7/30/2007 3:04:00 PM
Zinc	0.019	mg/L	J	0.0030	0.050	7/30/2007 3:04:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 3:37:08 PM
Arsenic	0.0012	mg/L	J	0.00100	0.0050	7/20/2007 3:37:08 PM
Barium	0.0840	mg/L		0.00100	0.0050	7/20/2007 3:37:08 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 5:16:58 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 3:37:08 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 3:37:08 PM
Cobalt	0.0044	mg/L	J	0.00100	0.0050	7/20/2007 3:37:08 PM
Copper	0.0073	mg/L		0.00100	0.0050	7/20/2007 3:37:08 PM
Lead	0.0007	mg/L	J	0.00020	0.0010	7/20/2007 3:37:08 PM
Manganese	0.401	mg/L		0.00100	0.0100	7/20/2007 3:37:08 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 3:37:08 PM
Nickel	0.0072	mg/L	J	0.00200	0.0100	7/20/2007 3:37:08 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 3:37:08 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 3:37:08 PM
Strontium	1.03	mg/L		0.00100	0.0050	7/20/2007 3:37:08 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 3:37:08 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 3:37:08 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-09
Client Sample ID:	SM-1R BIG RAW FOUR	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 3:31:21 PM
Arsenic	0.0017	mg/L	J	0.00100	0.0050	7/20/2007 3:31:21 PM
Barium	0.0918	mg/L		0.00100	0.0050	7/20/2007 3:31:21 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 5:11:10 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 3:31:21 PM
Chromium	0.0015	mg/L	J	0.00100	0.0050	7/20/2007 3:31:21 PM
Cobalt	0.0046	mg/L	J	0.00100	0.0050	7/20/2007 3:31:21 PM
Copper	0.0091	mg/L		0.00100	0.0050	7/20/2007 3:31:21 PM
Lead	0.0031	mg/L		0.00020	0.0010	7/20/2007 3:31:21 PM
Manganese	0.429	mg/L		0.00100	0.0100	7/20/2007 3:31:21 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/20/2007 3:31:21 PM
Nickel	0.0063	mg/L	J	0.00200	0.0100	7/20/2007 3:31:21 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 3:31:21 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 3:31:21 PM
Strontium	1.06	mg/L		0.00100	0.0050	7/20/2007 3:31:21 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 3:31:21 PM
Vanadium	0.0016	mg/L	J	0.00100	0.0100	7/20/2007 3:31:21 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:36:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:35:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 12:34:07 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 8:23:40 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 8:23:40 PM
Surr: o-Terphenyl	98.4	%REC			30-130	7/26/2007 8:23:40 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 9:37:19 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00071	0.0107	7/26/2007 5:41:00 PM
Acenaphthylene	ND	mg/L		0.00102	0.0107	7/26/2007 5:41:00 PM
Anthracene	ND	mg/L		0.00133	0.0107	7/26/2007 5:41:00 PM

Key:				
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-09
Client Sample ID:	SM-1R BIG RAW FOUR	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00076	0.0107	7/26/2007 5:41:00 PM
Benzo(a)anthracene	ND	mg/L		0.00098	0.0107	7/26/2007 5:41:00 PM
Benzo(a)pyrene	ND	mg/L		0.00127	0.0107	7/26/2007 5:41:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00156	0.0107	7/26/2007 5:41:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00202	0.0107	7/26/2007 5:41:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00136	0.0107	7/26/2007 5:41:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00074	0.0107	7/26/2007 5:41:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00096	0.0107	7/26/2007 5:41:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00097	0.0107	7/26/2007 5:41:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00642	0.0107	7/26/2007 5:41:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00122	0.0107	7/26/2007 5:41:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00337	0.0107	7/26/2007 5:41:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00160	0.0107	7/26/2007 5:41:00 PM
2-Chloronaphthalene	ND	mg/L		0.00104	0.0107	7/26/2007 5:41:00 PM
2-Chlorophenol	ND	mg/L		0.00126	0.0107	7/26/2007 5:41:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0107	7/26/2007 5:41:00 PM
Chrysene	ND	mg/L		0.00077	0.0107	7/26/2007 5:41:00 PM
o-Cresol	ND	mg/L		0.00102	0.0107	7/26/2007 5:41:00 PM
m,p-Cresol	ND	mg/L		0.00189	0.0214	7/26/2007 5:41:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00142	0.0107	7/26/2007 5:41:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00321	0.0107	7/26/2007 5:41:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00081	0.0107	7/26/2007 5:41:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00086	0.0107	7/26/2007 5:41:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00090	0.0107	7/26/2007 5:41:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00205	0.0107	7/26/2007 5:41:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00133	0.0107	7/26/2007 5:41:00 PM
Diethyl phthalate	ND	mg/L		0.00249	0.0107	7/26/2007 5:41:00 PM
Dimethyl phthalate	ND	mg/L		0.00272	0.0107	7/26/2007 5:41:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00153	0.0107	7/26/2007 5:41:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00239	0.0107	7/26/2007 5:41:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00204	0.0107	7/26/2007 5:41:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00197	0.0107	7/26/2007 5:41:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00200	0.0107	7/26/2007 5:41:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00206	0.0107	7/26/2007 5:41:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00093	0.0107	7/26/2007 5:41:00 PM
Fluoranthene	ND	mg/L		0.00167	0.0107	7/26/2007 5:41:00 PM
Fluorene	ND	mg/L		0.00082	0.0107	7/26/2007 5:41:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-09
Client Sample ID:	SM-1R BIG RAW FOUR	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00097	0.0107	7/26/2007 5:41:00 PM
Hexachlorobutadiene	ND	mg/L		0.00123	0.0107	7/26/2007 5:41:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00210	0.0107	7/26/2007 5:41:00 PM
Hexachloroethane	ND	mg/L		0.00101	0.0107	7/26/2007 5:41:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00209	0.0107	7/26/2007 5:41:00 PM
Isophorone	ND	mg/L		0.00088	0.0107	7/26/2007 5:41:00 PM
Naphthalene	ND	mg/L		0.00067	0.0107	7/26/2007 5:41:00 PM
Nitrobenzene	ND	mg/L		0.00119	0.0107	7/26/2007 5:41:00 PM
2-Nitrophenol	ND	mg/L		0.00244	0.0107	7/26/2007 5:41:00 PM
4-Nitrophenol	ND	mg/L		0.00159	0.0107	7/26/2007 5:41:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00141	0.0107	7/26/2007 5:41:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00109	0.0107	7/26/2007 5:41:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00107	0.0107	7/26/2007 5:41:00 PM
Pentachlorophenol	ND	mg/L		0.00209	0.0107	7/26/2007 5:41:00 PM
Phenanthrene	ND	mg/L		0.00093	0.0107	7/26/2007 5:41:00 PM
Phenol	ND	mg/L		0.00102	0.0107	7/26/2007 5:41:00 PM
Pyrene	ND	mg/L		0.00127	0.0107	7/26/2007 5:41:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00104	0.0107	7/26/2007 5:41:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00210	0.0107	7/26/2007 5:41:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00197	0.0107	7/26/2007 5:41:00 PM
Surr: 2-Fluorophenol	49.5	%REC			21-110	7/26/2007 5:41:00 PM
Surr: Phenol-d5	36.0	%REC			10-110	7/26/2007 5:41:00 PM
Surr: 2,4,6-Tribromophenol	83.4	%REC			10-123	7/26/2007 5:41:00 PM
Surr: Nitrobenzene-d5	82.9	%REC			35-114	7/26/2007 5:41:00 PM
Surr: 2-Fluorobiphenyl	68.6	%REC			43-116	7/26/2007 5:41:00 PM
Surr: 4-Terphenyl-d14	99.4	%REC			33-141	7/26/2007 5:41:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 5:41:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 2:38:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 2:38:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 2:38:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 2:38:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 2:38:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 2:38:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 2:38:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 2:38:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-09
Client Sample ID:	SM-1R BIG RAW FOUR	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 2:38:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 2:38:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 2:38:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 2:38:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 2:38:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 2:38:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 2:38:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 2:38:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 2:38:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 2:38:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 2:38:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 2:38:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 2:38:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 2:38:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 2:38:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 2:38:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 2:38:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 2:38:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 2:38:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 2:38:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 2:38:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 2:38:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 2:38:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 2:38:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 2:38:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 2:38:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 2:38:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 2:38:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 2:38:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 2:38:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 2:38:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 2:38:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 2:38:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 2:38:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 2:38:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 2:38:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 2:38:00 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-09
Client Sample ID:	SM-1R BIG RAW FOUR	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 2:38:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 2:38:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 2:38:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 2:38:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 2:38:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 2:38:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 2:38:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 2:38:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 2:38:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 2:38:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 2:38:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 2:38:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 2:38:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 2:38:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 2:38:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 2:38:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 2:38:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 2:38:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 2:38:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 2:38:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 2:38:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 2:38:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 2:38:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 2:38:00 PM
Surr: 1,2-Dichloroethane-d4	106	%REC			80-120	7/20/2007 2:38:00 PM
Surr: 4-Bromofluorobenzene	94.9	%REC			86-115	7/20/2007 2:38:00 PM
Surr: Dibromofluoromethane	105	%REC			80-120	7/20/2007 2:38:00 PM
Surr: Toluene-d8	101	%REC			88-110	7/20/2007 2:38:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 2:38:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	100	CFU/mL		NA	100	7/19/2007 3:05:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **BS**
Sulfate Reducing Bacteria	5,500	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-09
Client Sample ID:	SM-1R BIG RAW FOUR	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:15:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.56	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	3.29	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	8.62	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.09	mg/L	J	0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	69.1	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.21	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	595	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	322	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	46.8	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	235	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	236	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.87	SU		0	NA	7/23/2007 1:09:00 PM

Key:				
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	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-10
Client Sample ID:	SM-8T N. WELCH PSD	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.180	mg/L		0.0200	0.100	7/24/2007 6:37:00 AM
Calcium	8.02	mg/L		0.100	0.500	7/24/2007 6:37:00 AM
Iron	0.021	mg/L	J	0.0200	0.100	7/24/2007 6:37:00 AM
Magnesium	3.06	mg/L		0.400	0.500	7/24/2007 6:37:00 AM
Potassium	1.27	mg/L		0.300	1.00	7/24/2007 6:37:00 AM
Silicon	4.26	mg/L		0.0100	0.100	7/30/2007 5:38:00 PM
Sodium	243	mg/L		0.100	0.500	7/30/2007 3:34:00 PM
Zinc	0.086	mg/L		0.0030	0.050	7/30/2007 3:34:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.234	mg/L		0.0200	0.100	7/24/2007 6:19:00 AM
Calcium	8.39	mg/L		0.100	0.500	7/24/2007 6:19:00 AM
Iron	0.038	mg/L	J	0.0200	0.100	7/24/2007 6:19:00 AM
Magnesium	3.07	mg/L		0.400	0.500	7/24/2007 6:19:00 AM
Potassium	1.32	mg/L		0.300	1.00	7/24/2007 6:19:00 AM
Silicon	4.12	mg/L		0.0100	0.100	7/30/2007 5:32:00 PM
Sodium	242	mg/L		0.100	0.500	7/30/2007 3:16:00 PM
Zinc	0.014	mg/L	J	0.0030	0.050	7/30/2007 3:16:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 4:00:21 PM
Arsenic	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 4:00:21 PM
Barium	0.256	mg/L		0.00100	0.0050	7/20/2007 4:00:21 PM
Beryllium	0.0003	mg/L	J	0.00020	0.0010	7/24/2007 5:46:08 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 4:00:21 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 4:00:21 PM
Cobalt	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 4:00:21 PM
Copper	0.0078	mg/L		0.00100	0.0050	7/20/2007 4:00:21 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 4:00:21 PM
Manganese	0.0041	mg/L	J	0.00100	0.0100	7/20/2007 4:00:21 PM
Mercury	ND	mg/L		0.00020	0.0020	7/20/2007 4:00:21 PM
Molybdenum	0.0039	mg/L	J	0.00100	0.0050	7/20/2007 4:00:21 PM
Nickel	ND	mg/L		0.00200	0.0100	7/20/2007 4:00:21 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 4:00:21 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 4:00:21 PM
Strontium	0.313	mg/L		0.00100	0.0050	7/20/2007 4:00:21 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 4:00:21 PM
Vanadium	0.0022	mg/L	J	0.00100	0.0100	7/20/2007 4:00:21 PM

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-10
Client Sample ID:	SM-8T N. WELCH PSD	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 3:42:55 PM
Arsenic	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 3:42:55 PM
Barium	0.283	mg/L		0.00100	0.0050	7/20/2007 3:42:55 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 5:22:47 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 3:42:55 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 3:42:55 PM
Cobalt	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 3:42:55 PM
Copper	0.0070	mg/L		0.00100	0.0050	7/20/2007 3:42:55 PM
Lead	0.0002	mg/L	J	0.00020	0.0010	7/20/2007 3:42:55 PM
Manganese	0.0042	mg/L	J	0.00100	0.0100	7/20/2007 3:42:55 PM
Molybdenum	0.0038	mg/L	J	0.00100	0.0050	7/20/2007 3:42:55 PM
Nickel	ND	mg/L		0.00200	0.0100	7/20/2007 3:42:55 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 3:42:55 PM
Silver	ND	mg/L		0.00100	0.0050	7/20/2007 3:42:55 PM
Strontium	0.325	mg/L		0.00100	0.0050	7/20/2007 3:42:55 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 3:42:55 PM
Vanadium	0.0021	mg/L	J	0.00100	0.0100	7/20/2007 3:42:55 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:41:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/20/2007 12:37:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 12:46:39 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 8:57:25 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 8:57:25 PM
Surr: o-Terphenyl	89.2	%REC			30-130	7/26/2007 8:57:25 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 10:08:56 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00072	0.0107	7/26/2007 6:07:00 PM
Acenaphthylene	ND	mg/L		0.00102	0.0107	7/26/2007 6:07:00 PM
Anthracene	ND	mg/L		0.00133	0.0107	7/26/2007 6:07:00 PM

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CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-10
Client Sample ID:	SM-8T N. WELCH PSD	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00076	0.0107	7/26/2007 6:07:00 PM
Benzo(a)anthracene	ND	mg/L		0.00099	0.0107	7/26/2007 6:07:00 PM
Benzo(a)pyrene	ND	mg/L		0.00128	0.0107	7/26/2007 6:07:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00157	0.0107	7/26/2007 6:07:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00203	0.0107	7/26/2007 6:07:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00136	0.0107	7/26/2007 6:07:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00074	0.0107	7/26/2007 6:07:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00096	0.0107	7/26/2007 6:07:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00098	0.0107	7/26/2007 6:07:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00644	0.0107	7/26/2007 6:07:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00123	0.0107	7/26/2007 6:07:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00339	0.0107	7/26/2007 6:07:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00161	0.0107	7/26/2007 6:07:00 PM
2-Chloronaphthalene	ND	mg/L		0.00104	0.0107	7/26/2007 6:07:00 PM
2-Chlorophenol	ND	mg/L		0.00126	0.0107	7/26/2007 6:07:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0107	7/26/2007 6:07:00 PM
Chrysene	ND	mg/L		0.00078	0.0107	7/26/2007 6:07:00 PM
o-Cresol	ND	mg/L		0.00103	0.0107	7/26/2007 6:07:00 PM
m,p-Cresol	ND	mg/L		0.00190	0.0215	7/26/2007 6:07:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00143	0.0107	7/26/2007 6:07:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00322	0.0107	7/26/2007 6:07:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00081	0.0107	7/26/2007 6:07:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00086	0.0107	7/26/2007 6:07:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00090	0.0107	7/26/2007 6:07:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00206	0.0107	7/26/2007 6:07:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00134	0.0107	7/26/2007 6:07:00 PM
Diethyl phthalate	ND	mg/L		0.00250	0.0107	7/26/2007 6:07:00 PM
Dimethyl phthalate	ND	mg/L		0.00273	0.0107	7/26/2007 6:07:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00154	0.0107	7/26/2007 6:07:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00240	0.0107	7/26/2007 6:07:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00205	0.0107	7/26/2007 6:07:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00197	0.0107	7/26/2007 6:07:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00201	0.0107	7/26/2007 6:07:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00207	0.0107	7/26/2007 6:07:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00093	0.0107	7/26/2007 6:07:00 PM
Fluoranthene	ND	mg/L		0.00168	0.0107	7/26/2007 6:07:00 PM
Fluorene	ND	mg/L		0.00082	0.0107	7/26/2007 6:07:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-10
Client Sample ID:	SM-8T N. WELCH PSD	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00097	0.0107	7/26/2007 6:07:00 PM
Hexachlorobutadiene	ND	mg/L		0.00123	0.0107	7/26/2007 6:07:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00211	0.0107	7/26/2007 6:07:00 PM
Hexachloroethane	ND	mg/L		0.00101	0.0107	7/26/2007 6:07:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00210	0.0107	7/26/2007 6:07:00 PM
Isophorone	ND	mg/L		0.00088	0.0107	7/26/2007 6:07:00 PM
Naphthalene	ND	mg/L		0.00067	0.0107	7/26/2007 6:07:00 PM
Nitrobenzene	ND	mg/L		0.00119	0.0107	7/26/2007 6:07:00 PM
2-Nitrophenol	ND	mg/L		0.00245	0.0107	7/26/2007 6:07:00 PM
4-Nitrophenol	ND	mg/L		0.00160	0.0107	7/26/2007 6:07:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00142	0.0107	7/26/2007 6:07:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00110	0.0107	7/26/2007 6:07:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00108	0.0107	7/26/2007 6:07:00 PM
Pentachlorophenol	ND	mg/L		0.00210	0.0107	7/26/2007 6:07:00 PM
Phenanthrene	ND	mg/L		0.00093	0.0107	7/26/2007 6:07:00 PM
Phenol	ND	mg/L		0.00102	0.0107	7/26/2007 6:07:00 PM
Pyrene	ND	mg/L		0.00127	0.0107	7/26/2007 6:07:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00105	0.0107	7/26/2007 6:07:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00211	0.0107	7/26/2007 6:07:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00197	0.0107	7/26/2007 6:07:00 PM
Surr: 2-Fluorophenol	<1	%REC	S		21-110	7/26/2007 6:07:00 PM
Surr: Phenol-d5	<1	%REC	S		10-110	7/26/2007 6:07:00 PM
Surr: 2,4,6-Tribromophenol	27.0	%REC			10-123	7/26/2007 6:07:00 PM
Surr: Nitrobenzene-d5	86.2	%REC			35-114	7/26/2007 6:07:00 PM
Surr: 2-Fluorobiphenyl	71.4	%REC			43-116	7/26/2007 6:07:00 PM
Surr: 4-Terphenyl-d14	101	%REC			33-141	7/26/2007 6:07:00 PM
TIC: Butane, 2,3-dichloro-2-methyl-	0.229	mg/L		NA	NA	7/26/2007 6:07:00 PM
TIC: Propane, 1-ethoxy-	0.223	mg/L		NA	NA	7/26/2007 6:07:00 PM
TIC: Unidentified peak 1	0.0154	mg/L		NA	NA	7/26/2007 6:07:00 PM
TIC: Unidentified peak 2	0.0171	mg/L		NA	NA	7/26/2007 6:07:00 PM
TIC: Unidentified peak 3	0.0155	mg/L		NA	NA	7/26/2007 6:07:00 PM

NOTES:

* Insufficient data for tentative identification. Undentified peak 1 has primary ion 93; unidentified peak 2 has primary ion 146 and is similar to unidentified peak 1 in 0707930-08A; unidentified peak 3 has primary ion 165.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 3:11:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 3:11:00 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-10
Client Sample ID:	SM-8T N. WELCH PSD	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 3:11:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 3:11:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 3:11:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 3:11:00 PM
Bromodichloromethane	16.7	µg/L		0.16	1.0	7/20/2007 3:11:00 PM
Bromoform	7.5	µg/L		0.40	1.0	7/20/2007 3:11:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 3:11:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 3:11:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 3:11:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 3:11:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 3:11:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 3:11:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 3:11:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 3:11:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 3:11:00 PM
Chloroform	10.2	µg/L		0.25	1.0	7/20/2007 3:11:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 3:11:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 3:11:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 3:11:00 PM
Dibromochloromethane	24.3	µg/L		0.42	1.0	7/20/2007 3:11:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 3:11:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 3:11:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 3:11:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 3:11:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 3:11:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 3:11:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 3:11:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 3:11:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 3:11:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 3:11:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 3:11:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 3:11:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 3:11:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 3:11:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 3:11:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 3:11:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 3:11:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-10
Client Sample ID:	SM-8T N. WELCH PSD	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 3:11:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 3:11:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 3:11:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 3:11:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 3:11:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 3:11:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 3:11:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 3:11:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 3:11:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 3:11:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 3:11:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 3:11:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 3:11:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 3:11:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 3:11:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 3:11:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 3:11:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 3:11:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 3:11:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 3:11:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 3:11:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 3:11:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 3:11:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 3:11:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 3:11:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 3:11:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 3:11:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 3:11:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 3:11:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 3:11:00 PM
Surr: 1,2-Dichloroethane-d4	105	%REC			80-120	7/20/2007 3:11:00 PM
Surr: 4-Bromofluorobenzene	93.7	%REC			86-115	7/20/2007 3:11:00 PM
Surr: Dibromofluoromethane	103	%REC			80-120	7/20/2007 3:11:00 PM
Surr: Toluene-d8	86.9	%REC	S		88-110	7/20/2007 3:11:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 3:11:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-10
Client Sample ID:	SM-8T N. WELCH PSD	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	ND	CFU/mL		NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	ND	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.020	0.10	7/19/2007 9:39:00 AM
Nitrogen, Nitrite	5.31	mg/L		0.050	0.50	7/19/2007 9:39:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	43.7	mg/L		0.100	1.00	7/19/2007 9:39:00 AM
Fluoride	0.99	mg/L		0.060	0.20	7/19/2007 9:39:00 AM
Sulfate	10.4	mg/L		1.00	5.00	7/19/2007 9:39:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,190	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	629	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	22.4	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	576	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	3.7	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	580	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.83	SU		0	NA	7/23/2007 1:09:00 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-11
Client Sample ID:	SM-8R N. WELCH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.062	mg/L	J	0.0200	0.100	7/24/2007 7:29:00 AM
Calcium	7.20	mg/L		0.100	0.500	7/24/2007 7:29:00 AM
Iron	0.308	mg/L		0.0200	0.100	7/24/2007 7:29:00 AM
Magnesium	2.95	mg/L		0.400	0.500	7/24/2007 7:29:00 AM
Potassium	1.27	mg/L		0.300	1.00	7/24/2007 7:29:00 AM
Silicon	4.17	mg/L		0.0100	0.100	7/30/2007 6:01:00 PM
Sodium	245	mg/L		0.100	0.500	7/30/2007 4:32:00 PM
Zinc	0.034	mg/L	J	0.0030	0.050	7/30/2007 4:32:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.075	mg/L	J	0.0200	0.100	7/24/2007 7:12:00 AM
Calcium	7.16	mg/L		0.100	0.500	7/24/2007 7:12:00 AM
Iron	0.433	mg/L		0.0200	0.100	7/24/2007 7:12:00 AM
Magnesium	2.87	mg/L		0.400	0.500	7/24/2007 7:12:00 AM
Potassium	1.30	mg/L		0.300	1.00	7/24/2007 7:12:00 AM
Silicon	4.12	mg/L		0.0100	0.100	7/30/2007 5:53:00 PM
Sodium	255	mg/L		0.100	0.500	7/30/2007 4:09:00 PM
Zinc	0.011	mg/L	J	0.0030	0.050	7/30/2007 4:09:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 4:46:37 PM
Arsenic	0.0020	mg/L	J	0.00100	0.0050	7/20/2007 4:46:37 PM
Barium	0.283	mg/L		0.00100	0.0050	7/20/2007 4:46:37 PM
Beryllium	0.0003	mg/L	J	0.00020	0.0010	7/24/2007 6:38:32 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 4:46:37 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 4:46:37 PM
Cobalt	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 4:46:37 PM
Copper	0.0018	mg/L	J	0.00100	0.0050	7/20/2007 4:46:37 PM
Lead	0.0006	mg/L	J	0.00020	0.0010	7/20/2007 4:46:37 PM
Manganese	0.0311	mg/L		0.00100	0.0100	7/20/2007 4:46:37 PM
Molybdenum	0.0042	mg/L	J	0.00100	0.0050	7/20/2007 4:46:37 PM
Nickel	ND	mg/L		0.00200	0.0100	7/20/2007 4:46:37 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 4:46:37 PM
Silver	0.0011	mg/L	J	0.00100	0.0050	7/24/2007 6:38:32 PM
Strontium	0.314	mg/L		0.00100	0.0050	7/20/2007 4:46:37 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 4:46:37 PM
Vanadium	0.0021	mg/L	J	0.00100	0.0100	7/20/2007 4:46:37 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-11
Client Sample ID:	SM-8R N. WELCH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/20/2007 4:29:15 PM
Arsenic	0.0020	mg/L	J	0.00100	0.0050	7/20/2007 4:29:15 PM
Barium	0.290	mg/L		0.00100	0.0050	7/20/2007 4:29:15 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 6:15:14 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 4:29:15 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/20/2007 4:29:15 PM
Cobalt	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 4:29:15 PM
Copper	0.0022	mg/L	J	0.00100	0.0050	7/20/2007 4:29:15 PM
Lead	0.0010	mg/L		0.00020	0.0010	7/20/2007 4:29:15 PM
Manganese	0.0297	mg/L		0.00100	0.0100	7/20/2007 4:29:15 PM
Molybdenum	0.0041	mg/L	J	0.00100	0.0050	7/20/2007 4:29:15 PM
Nickel	ND	mg/L		0.00200	0.0100	7/20/2007 4:29:15 PM
Selenium	ND	mg/L		0.00100	0.0050	7/20/2007 4:29:15 PM
Silver	ND	mg/L		0.00100	0.0050	7/24/2007 6:15:14 PM
Strontium	0.308	mg/L		0.00100	0.0050	7/20/2007 4:29:15 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 4:29:15 PM
Vanadium	0.0021	mg/L	J	0.00100	0.0100	7/20/2007 4:29:15 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/23/2007 1:15:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/23/2007 1:11:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 12:59:14 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 9:31:13 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 9:31:13 PM
Surr: o-Terphenyl	94.7	%REC			30-130	7/26/2007 9:31:13 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 10:40:51 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00071	0.0106	7/26/2007 6:33:00 PM
Acenaphthylene	ND	mg/L		0.00101	0.0106	7/26/2007 6:33:00 PM
Anthracene	ND	mg/L		0.00132	0.0106	7/26/2007 6:33:00 PM

Key:

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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-11
Client Sample ID:	SM-8R N. WELCH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00076	0.0106	7/26/2007 6:33:00 PM
Benzo(a)anthracene	ND	mg/L		0.00098	0.0106	7/26/2007 6:33:00 PM
Benzo(a)pyrene	ND	mg/L		0.00126	0.0106	7/26/2007 6:33:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00155	0.0106	7/26/2007 6:33:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00200	0.0106	7/26/2007 6:33:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00135	0.0106	7/26/2007 6:33:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00073	0.0106	7/26/2007 6:33:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00095	0.0106	7/26/2007 6:33:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00097	0.0106	7/26/2007 6:33:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00638	0.0106	7/26/2007 6:33:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00122	0.0106	7/26/2007 6:33:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00335	0.0106	7/26/2007 6:33:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00159	0.0106	7/26/2007 6:33:00 PM
2-Chloronaphthalene	ND	mg/L		0.00103	0.0106	7/26/2007 6:33:00 PM
2-Chlorophenol	ND	mg/L		0.00125	0.0106	7/26/2007 6:33:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0106	7/26/2007 6:33:00 PM
Chrysene	ND	mg/L		0.00077	0.0106	7/26/2007 6:33:00 PM
o-Cresol	ND	mg/L		0.00101	0.0106	7/26/2007 6:33:00 PM
m,p-Cresol	ND	mg/L		0.00188	0.0213	7/26/2007 6:33:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00142	0.0106	7/26/2007 6:33:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00319	0.0106	7/26/2007 6:33:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00080	0.0106	7/26/2007 6:33:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00085	0.0106	7/26/2007 6:33:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00089	0.0106	7/26/2007 6:33:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00204	0.0106	7/26/2007 6:33:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00132	0.0106	7/26/2007 6:33:00 PM
Diethyl phthalate	ND	mg/L		0.00247	0.0106	7/26/2007 6:33:00 PM
Dimethyl phthalate	ND	mg/L		0.00270	0.0106	7/26/2007 6:33:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00152	0.0106	7/26/2007 6:33:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00238	0.0106	7/26/2007 6:33:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0106	7/26/2007 6:33:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00195	0.0106	7/26/2007 6:33:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00199	0.0106	7/26/2007 6:33:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00205	0.0106	7/26/2007 6:33:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00092	0.0106	7/26/2007 6:33:00 PM
Fluoranthene	ND	mg/L		0.00166	0.0106	7/26/2007 6:33:00 PM
Fluorene	ND	mg/L		0.00081	0.0106	7/26/2007 6:33:00 PM

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-11
Client Sample ID:	SM-8R N. WELCH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00096	0.0106	7/26/2007 6:33:00 PM
Hexachlorobutadiene	ND	mg/L		0.00122	0.0106	7/26/2007 6:33:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00209	0.0106	7/26/2007 6:33:00 PM
Hexachloroethane	ND	mg/L		0.00100	0.0106	7/26/2007 6:33:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00208	0.0106	7/26/2007 6:33:00 PM
Isophorone	ND	mg/L		0.00087	0.0106	7/26/2007 6:33:00 PM
Naphthalene	ND	mg/L		0.00066	0.0106	7/26/2007 6:33:00 PM
Nitrobenzene	ND	mg/L		0.00118	0.0106	7/26/2007 6:33:00 PM
2-Nitrophenol	ND	mg/L		0.00242	0.0106	7/26/2007 6:33:00 PM
4-Nitrophenol	ND	mg/L		0.00158	0.0106	7/26/2007 6:33:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00140	0.0106	7/26/2007 6:33:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00108	0.0106	7/26/2007 6:33:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00107	0.0106	7/26/2007 6:33:00 PM
Pentachlorophenol	ND	mg/L		0.00208	0.0106	7/26/2007 6:33:00 PM
Phenanthrene	ND	mg/L		0.00092	0.0106	7/26/2007 6:33:00 PM
Phenol	ND	mg/L		0.00101	0.0106	7/26/2007 6:33:00 PM
Pyrene	ND	mg/L		0.00126	0.0106	7/26/2007 6:33:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00103	0.0106	7/26/2007 6:33:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00209	0.0106	7/26/2007 6:33:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00195	0.0106	7/26/2007 6:33:00 PM
Surr: 2-Fluorophenol	50.6	%REC			21-110	7/26/2007 6:33:00 PM
Surr: Phenol-d5	36.1	%REC			10-110	7/26/2007 6:33:00 PM
Surr: 2,4,6-Tribromophenol	83.2	%REC			10-123	7/26/2007 6:33:00 PM
Surr: Nitrobenzene-d5	85.9	%REC			35-114	7/26/2007 6:33:00 PM
Surr: 2-Fluorobiphenyl	71.8	%REC			43-116	7/26/2007 6:33:00 PM
Surr: 4-Terphenyl-d14	101	%REC			33-141	7/26/2007 6:33:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/26/2007 6:33:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 3:43:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 3:43:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 3:43:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 3:43:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 3:43:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 3:43:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 3:43:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 3:43:00 PM

Key:

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-11
Client Sample ID:	SM-8R N. WELCH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 3:43:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 3:43:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 3:43:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 3:43:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 3:43:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 3:43:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 3:43:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 3:43:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 3:43:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 3:43:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 3:43:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 3:43:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 3:43:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 3:43:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 3:43:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 3:43:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 3:43:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 3:43:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 3:43:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 3:43:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 3:43:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 3:43:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 3:43:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 3:43:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 3:43:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 3:43:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 3:43:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 3:43:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 3:43:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 3:43:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 3:43:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 3:43:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 3:43:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 3:43:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 3:43:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 3:43:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 3:43:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-11
Client Sample ID:	SM-8R N. WELCH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 3:43:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 3:43:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 3:43:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 3:43:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 3:43:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 3:43:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 3:43:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 3:43:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 3:43:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 3:43:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 3:43:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 3:43:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 3:43:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 3:43:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 3:43:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 3:43:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 3:43:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 3:43:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 3:43:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 3:43:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 3:43:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 3:43:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 3:43:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 3:43:00 PM
Surr: 1,2-Dichloroethane-d4	106	%REC			80-120	7/20/2007 3:43:00 PM
Surr: 4-Bromofluorobenzene	94.2	%REC			86-115	7/20/2007 3:43:00 PM
Surr: Dibromofluoromethane	104	%REC			80-120	7/20/2007 3:43:00 PM
Surr: Toluene-d8	102	%REC			88-110	7/20/2007 3:43:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 3:43:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **BS**
Iron Related Bacteria	2,550	CFU/mL		NA	100	7/19/2007 3:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	1,000	CFU/mL		NA	100	7/19/2007 3:05:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-11
Client Sample ID:	SM-8R N. WELCH	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 3:20:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	5.51	mg/L		0.020	0.10	7/20/2007 9:46:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/20/2007 9:46:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	35.1	mg/L		0.100	1.00	7/20/2007 9:46:00 AM
Fluoride	0.59	mg/L		0.060	0.20	7/20/2007 9:46:00 AM
Sulfate	12.5	mg/L		1.00	5.00	7/20/2007 9:46:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.55	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,220	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	637	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	5	mg/L	J	1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	29.0	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	602	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	3.9	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	606	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.84	SU		0	NA	7/23/2007 1:09:00 PM

Key:				
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12
Client Sample ID:	SM-SLURRY LIQUIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.195	mg/L		0.0200	0.100	7/24/2007 7:47:00 AM
Calcium	51.4	mg/L		0.100	0.500	7/24/2007 7:47:00 AM
Iron	ND	mg/L		0.0200	0.100	7/24/2007 7:47:00 AM
Magnesium	20.8	mg/L		0.400	0.500	7/24/2007 7:47:00 AM
Potassium	6.90	mg/L		0.300	1.00	7/24/2007 7:47:00 AM
Silicon	3.30	mg/L		0.0100	0.100	7/30/2007 6:05:00 PM
Sodium	58.8	mg/L		0.100	0.500	7/30/2007 4:44:00 PM
Zinc	0.016	mg/L	J	0.0030	0.050	7/30/2007 4:44:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.651	mg/L		0.0200	0.100	7/24/2007 7:41:00 AM
Calcium	51.7	mg/L		0.100	0.500	7/24/2007 7:41:00 AM
Iron	0.910	mg/L		0.0200	0.100	7/24/2007 7:41:00 AM
Magnesium	21.0	mg/L		0.400	0.500	7/24/2007 7:41:00 AM
Potassium	7.07	mg/L		0.300	1.00	7/24/2007 7:41:00 AM
Silicon	3.76	mg/L		0.0100	0.100	7/30/2007 6:03:00 PM
Sodium	55.5	mg/L		0.100	0.500	7/30/2007 4:38:00 PM
Zinc	0.027	mg/L	J	0.0030	0.050	7/30/2007 4:38:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0220	mg/L		0.00020	0.0010	7/20/2007 4:58:15 PM
Arsenic	0.0039	mg/L	J	0.00100	0.0050	7/20/2007 4:58:15 PM
Barium	0.0809	mg/L		0.00100	0.0050	7/20/2007 4:58:15 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	7/24/2007 6:50:12 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 4:58:15 PM
Chromium	0.0013	mg/L	J	0.00100	0.0050	7/20/2007 4:58:15 PM
Cobalt	0.0021	mg/L	J	0.00100	0.0050	7/20/2007 4:58:15 PM
Copper	0.0012	mg/L	J	0.00100	0.0050	7/20/2007 4:58:15 PM
Lead	ND	mg/L		0.00020	0.0010	7/20/2007 4:58:15 PM
Manganese	0.0141	mg/L		0.00100	0.0100	7/20/2007 4:58:15 PM
Molybdenum	0.0176	mg/L		0.00100	0.0050	7/20/2007 4:58:15 PM
Nickel	0.0043	mg/L	J	0.00200	0.0100	7/20/2007 4:58:15 PM
Selenium	0.0082	mg/L		0.00100	0.0050	7/20/2007 4:58:15 PM
Silver	ND	mg/L		0.00100	0.0050	7/24/2007 6:50:12 PM
Strontium	1.16	mg/L		0.00100	0.0050	7/20/2007 4:58:15 PM
Thallium	ND	mg/L		0.00020	0.0010	7/20/2007 4:58:15 PM
Vanadium	0.0018	mg/L	J	0.00100	0.0100	7/20/2007 4:58:15 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12
Client Sample ID:	SM-SLURRY LIQUIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0215	mg/L		0.00020	0.0010	7/20/2007 4:52:25 PM
Arsenic	0.0043	mg/L	J	0.00100	0.0050	7/20/2007 4:52:25 PM
Barium	0.114	mg/L		0.00100	0.0050	7/20/2007 4:52:25 PM
Beryllium	0.0004	mg/L	J	0.00020	0.0010	7/24/2007 6:44:21 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/20/2007 4:52:25 PM
Chromium	0.0016	mg/L	J	0.00100	0.0050	7/20/2007 4:52:25 PM
Cobalt	0.0024	mg/L	J	0.00100	0.0050	7/20/2007 4:52:25 PM
Copper	0.0018	mg/L	J	0.00100	0.0050	7/20/2007 4:52:25 PM
Lead	0.0008	mg/L	J	0.00020	0.0010	7/20/2007 4:52:25 PM
Manganese	0.0177	mg/L		0.00100	0.0100	7/20/2007 4:52:25 PM
Molybdenum	0.0178	mg/L		0.00100	0.0050	7/20/2007 4:52:25 PM
Nickel	0.0052	mg/L	J	0.00200	0.0100	7/20/2007 4:52:25 PM
Selenium	0.0082	mg/L		0.00100	0.0050	7/20/2007 4:52:25 PM
Silver	ND	mg/L		0.00100	0.0050	7/24/2007 6:44:21 PM
Strontium	1.17	mg/L		0.00100	0.0050	7/20/2007 4:52:25 PM
Thallium	0.0002	mg/L	J	0.00020	0.0010	7/20/2007 4:52:25 PM
Vanadium	0.0021	mg/L	J	0.00100	0.0100	7/20/2007 4:52:25 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/23/2007 1:21:00 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/23/2007 1:19:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	7/24/2007 1:11:46 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.10	7/26/2007 10:05:05 PM
TPH (Oil Range)	ND	mg/L		0.046	0.25	7/26/2007 10:05:05 PM
Surr: o-Terphenyl	95.3	%REC			30-130	7/26/2007 10:05:05 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/23/2007 11:13:06 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00096	0.0144	7/26/2007 6:59:00 PM
Acenaphthylene	ND	mg/L		0.00137	0.0144	7/26/2007 6:59:00 PM
Anthracene	ND	mg/L		0.00179	0.0144	7/26/2007 6:59:00 PM

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12
Client Sample ID:	SM-SLURRY LIQUIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzidine	ND	mg/L		0.00103	0.0144	7/26/2007 6:59:00 PM
Benzo(a)anthracene	ND	mg/L		0.00133	0.0144	7/26/2007 6:59:00 PM
Benzo(a)pyrene	ND	mg/L		0.00172	0.0144	7/26/2007 6:59:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00211	0.0144	7/26/2007 6:59:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00272	0.0144	7/26/2007 6:59:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00183	0.0144	7/26/2007 6:59:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00099	0.0144	7/26/2007 6:59:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00129	0.0144	7/26/2007 6:59:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00131	0.0144	7/26/2007 6:59:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00866	0.0144	7/26/2007 6:59:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00165	0.0144	7/26/2007 6:59:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00456	0.0144	7/26/2007 6:59:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00216	0.0144	7/26/2007 6:59:00 PM
2-Chloronaphthalene	ND	mg/L		0.00140	0.0144	7/26/2007 6:59:00 PM
2-Chlorophenol	ND	mg/L		0.00169	0.0144	7/26/2007 6:59:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00103	0.0144	7/26/2007 6:59:00 PM
Chrysene	ND	mg/L		0.00104	0.0144	7/26/2007 6:59:00 PM
o-Cresol	ND	mg/L		0.00138	0.0144	7/26/2007 6:59:00 PM
m,p-Cresol	ND	mg/L		0.00255	0.0289	7/26/2007 6:59:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00192	0.0144	7/26/2007 6:59:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00433	0.0144	7/26/2007 6:59:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00109	0.0144	7/26/2007 6:59:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00116	0.0144	7/26/2007 6:59:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00121	0.0144	7/26/2007 6:59:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00277	0.0144	7/26/2007 6:59:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00180	0.0144	7/26/2007 6:59:00 PM
Diethyl phthalate	ND	mg/L		0.00336	0.0144	7/26/2007 6:59:00 PM
Dimethyl phthalate	ND	mg/L		0.00367	0.0144	7/26/2007 6:59:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00207	0.0144	7/26/2007 6:59:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00323	0.0144	7/26/2007 6:59:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00276	0.0144	7/26/2007 6:59:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00265	0.0144	7/26/2007 6:59:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00270	0.0144	7/26/2007 6:59:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00278	0.0144	7/26/2007 6:59:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00125	0.0144	7/26/2007 6:59:00 PM
Fluoranthene	ND	mg/L		0.00226	0.0144	7/26/2007 6:59:00 PM
Fluorene	ND	mg/L		0.00110	0.0144	7/26/2007 6:59:00 PM

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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12
Client Sample ID:	SM-SLURRY LIQUIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobenzene	ND	mg/L		0.00131	0.0144	7/26/2007 6:59:00 PM
Hexachlorobutadiene	ND	mg/L		0.00166	0.0144	7/26/2007 6:59:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00284	0.0144	7/26/2007 6:59:00 PM
Hexachloroethane	ND	mg/L		0.00136	0.0144	7/26/2007 6:59:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00282	0.0144	7/26/2007 6:59:00 PM
Isophorone	ND	mg/L		0.00118	0.0144	7/26/2007 6:59:00 PM
Naphthalene	ND	mg/L		0.00090	0.0144	7/26/2007 6:59:00 PM
Nitrobenzene	ND	mg/L		0.00161	0.0144	7/26/2007 6:59:00 PM
2-Nitrophenol	ND	mg/L		0.00329	0.0144	7/26/2007 6:59:00 PM
4-Nitrophenol	ND	mg/L		0.00215	0.0144	7/26/2007 6:59:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00191	0.0144	7/26/2007 6:59:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00147	0.0144	7/26/2007 6:59:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00145	0.0144	7/26/2007 6:59:00 PM
Pentachlorophenol	ND	mg/L		0.00283	0.0144	7/26/2007 6:59:00 PM
Phenanthrene	ND	mg/L		0.00125	0.0144	7/26/2007 6:59:00 PM
Phenol	ND	mg/L		0.00137	0.0144	7/26/2007 6:59:00 PM
Pyrene	ND	mg/L		0.00171	0.0144	7/26/2007 6:59:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00141	0.0144	7/26/2007 6:59:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00284	0.0144	7/26/2007 6:59:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00265	0.0144	7/26/2007 6:59:00 PM
Surr: 2-Fluorophenol	58.6	%REC			21-110	7/26/2007 6:59:00 PM
Surr: Phenol-d5	45.7	%REC			10-110	7/26/2007 6:59:00 PM
Surr: 2,4,6-Tribromophenol	83.5	%REC			10-123	7/26/2007 6:59:00 PM
Surr: Nitrobenzene-d5	88.2	%REC			35-114	7/26/2007 6:59:00 PM
Surr: 2-Fluorobiphenyl	73.8	%REC			43-116	7/26/2007 6:59:00 PM
Surr: 4-Terphenyl-d14	107	%REC			33-141	7/26/2007 6:59:00 PM
TIC: 1-Butene, 3,3-dimethyl-	0.0470	mg/L		NA	NA	7/26/2007 6:59:00 PM
TIC: 2-Propanoic acid, 2-methyl-, ethenyl ester	0.0372	mg/L		NA	NA	7/26/2007 6:59:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 4:16:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 4:16:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 4:16:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 4:16:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 4:16:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 4:16:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 4:16:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12
Client Sample ID:	SM-SLURRY LIQUIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 4:16:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 4:16:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 4:16:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 4:16:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 4:16:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 4:16:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 4:16:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 4:16:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 4:16:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 4:16:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 4:16:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 4:16:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 4:16:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 4:16:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 4:16:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 4:16:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 4:16:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 4:16:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 4:16:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 4:16:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 4:16:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 4:16:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 4:16:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 4:16:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 4:16:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 4:16:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 4:16:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 4:16:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 4:16:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 4:16:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 4:16:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 4:16:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 4:16:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 4:16:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 4:16:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 4:16:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 4:16:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12
Client Sample ID:	SM-SLURRY LIQUIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 4:16:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 4:16:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 4:16:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 4:16:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 4:16:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 4:16:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 4:16:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 4:16:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 4:16:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 4:16:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 4:16:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 4:16:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 4:16:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 4:16:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 4:16:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 4:16:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 4:16:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 4:16:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 4:16:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 4:16:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 4:16:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 4:16:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 4:16:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 4:16:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 4:16:00 PM
Surr: 1,2-Dichloroethane-d4	108	%REC			80-120	7/20/2007 4:16:00 PM
Surr: 4-Bromofluorobenzene	95.9	%REC			86-115	7/20/2007 4:16:00 PM
Surr: Dibromofluoromethane	105	%REC			80-120	7/20/2007 4:16:00 PM
Surr: Toluene-d8	102	%REC			88-110	7/20/2007 4:16:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/20/2007 4:16:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/19/2007 2:45:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.45	mg/L		0.020	0.10	7/20/2007 9:46:00 AM
Nitrogen, Nitrite	2.32	mg/L		0.050	0.50	7/20/2007 9:46:00 AM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12
Client Sample ID:	SM-SLURRY LIQUIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	0.18	mg/L	J	0.100	1.00	7/20/2007 9:46:00 AM
Fluoride	8.39	mg/L		0.060	0.20	7/20/2007 9:46:00 AM
Sulfate	157	mg/L		1.00	5.00	7/20/2007 9:46:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.18	mg/L		0.020	0.10	7/19/2007 12:15:00 PM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	702	µmhos/cm		1.00	1.0	7/19/2007 7:30:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	423	mg/L		1.0	10	7/19/2007 8:50:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	5,440	mg/L		1.0	10	7/19/2007 9:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	6.8	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	180	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	1.4	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	181	mg/L		1.00	1.0	7/23/2007 1:09:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.93	SU		0	NA	7/23/2007 1:09:00 PM

Key:				
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12B
Client Sample ID:	SM-SLURRY SOLIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010B**			Analyst: **JD**
Aluminum	1,910	mg/Kg		0.200	2.50	7/23/2007 12:34:00 PM
Antimony	0.550	mg/Kg	J	0.500	5.00	7/23/2007 12:34:00 PM
Arsenic	1.20	mg/Kg	J	0.500	5.00	7/23/2007 12:34:00 PM
Barium	99.2	mg/Kg		0.200	2.50	7/23/2007 12:34:00 PM
Beryllium	0.425	mg/Kg		0.0300	0.250	7/23/2007 12:34:00 PM
Cadmium	ND	mg/Kg		0.0500	0.500	7/23/2007 12:34:00 PM
Calcium	424	mg/Kg		2.50	25.0	7/23/2007 12:34:00 PM
Chromium	2.77	mg/Kg		0.200	2.50	7/23/2007 12:34:00 PM
Cobalt	1.99	mg/Kg	J	0.200	2.50	7/23/2007 12:34:00 PM
Copper	4.59	mg/Kg		0.200	2.50	7/23/2007 12:34:00 PM
Iron	2,060	mg/Kg		0.250	2.50	7/23/2007 12:34:00 PM
Lead	2.95	mg/Kg	J	0.500	5.00	7/23/2007 12:34:00 PM
Magnesium	620	mg/Kg		2.50	12.0	7/23/2007 12:34:00 PM
Manganese	22.5	mg/Kg		0.100	2.50	7/23/2007 12:34:00 PM
Molybdenum	0.395	mg/Kg	J	0.200	2.50	7/23/2007 12:34:00 PM
Nickel	4.34	mg/Kg		0.250	2.50	7/23/2007 12:34:00 PM
Potassium	931	mg/Kg		10.0	25.0	7/23/2007 3:00:00 PM
Selenium	ND	mg/Kg		0.500	5.00	7/23/2007 12:34:00 PM
Silicon	453	mg/Kg		0.250	2.50	7/24/2007 2:08:00 PM
Silver	ND	mg/Kg		0.400	5.00	7/24/2007 3:41:00 PM
Sodium	44.3	mg/Kg		2.50	25.0	7/23/2007 12:34:00 PM
Strontium	16.8	mg/Kg		0.0250	2.50	7/23/2007 4:28:00 PM
Thallium	ND	mg/Kg		0.500	5.00	7/23/2007 12:34:00 PM
Vanadium	3.14	mg/Kg		0.200	2.50	7/23/2007 12:34:00 PM
Zinc	8.60	mg/Kg		0.200	2.50	7/23/2007 12:34:00 PM
MERCURY, TOTAL			**SW7471A**			Analyst: **JD**
Mercury	ND	mg/kg		0.0200	0.100	7/23/2007 2:36:00 PM
PERCENT MOISTURE			**SM2540 B**			Analyst: **CDS**
Percent Moisture	51	wt%		0.01	0.5	7/30/2007
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	280	mg/Kg		2.40	3.98	7/27/2007 11:04:33 PM
TPH (Oil Range)	391	mg/Kg		1.04	9.96	7/27/2007 11:04:33 PM
Surr: o-Terphenyl	86.7	%REC			30-130	7/27/2007 11:04:33 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Ethylene Glycol	ND	mg/Kg		192	192	8/5/2007 2:02:41 PM

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PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12B
Client Sample ID:	SM-SLURRY SOLIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/Kg		0.0191	0.333	7/25/2007 4:51:00 PM
Acenaphthylene	ND	mg/Kg		0.0260	0.333	7/25/2007 4:51:00 PM
Anthracene	ND	mg/Kg		0.0222	0.333	7/25/2007 4:51:00 PM
Benzidine	ND	mg/Kg		0.0036	0.333	7/25/2007 4:51:00 PM
Benzo(a)anthracene	ND	mg/Kg		0.0240	0.333	7/25/2007 4:51:00 PM
Benzo(a)pyrene	0.167	mg/Kg	J	0.0308	0.333	7/25/2007 4:51:00 PM
Benzo(b)fluoranthene	ND	mg/Kg		0.0315	0.333	7/25/2007 4:51:00 PM
Benzo(g,h,i)perylene	0.092	mg/Kg	J	0.0294	0.333	7/25/2007 4:51:00 PM
Benzo(k)fluoranthene	0.191	mg/Kg	J	0.0395	0.333	7/25/2007 4:51:00 PM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.0253	0.333	7/25/2007 4:51:00 PM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.0303	0.333	7/25/2007 4:51:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.0312	0.333	7/25/2007 4:51:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/Kg		0.200	0.333	7/25/2007 4:51:00 PM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.0272	0.333	7/25/2007 4:51:00 PM
Butyl benzyl phthalate	ND	mg/Kg		0.0403	0.333	7/25/2007 4:51:00 PM
4-Chloro-3-methylphenol	ND	mg/Kg		0.0252	0.333	7/25/2007 4:51:00 PM
2-Chloronaphthalene	ND	mg/Kg		0.0243	0.333	7/25/2007 4:51:00 PM
2-Chlorophenol	ND	mg/Kg		0.0267	0.333	7/25/2007 4:51:00 PM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.0228	0.333	7/25/2007 4:51:00 PM
Chrysene	0.528	mg/Kg		0.0190	0.333	7/25/2007 4:51:00 PM
o-Cresol	ND	mg/Kg		0.0259	0.333	7/25/2007 4:51:00 PM
m,p-Cresol	ND	mg/Kg		0.0583	0.666	7/25/2007 4:51:00 PM
Dibenzo(a,h)anthracene	ND	mg/Kg		0.0290	0.333	7/25/2007 4:51:00 PM
Di-n-butyl phthalate	ND	mg/Kg		0.100	0.333	7/25/2007 4:51:00 PM
1,2-Dichlorobenzene	ND	mg/Kg		0.0289	0.333	7/25/2007 4:51:00 PM
1,3-Dichlorobenzene	ND	mg/Kg		0.0381	0.333	7/25/2007 4:51:00 PM
1,4-Dichlorobenzene	ND	mg/Kg		0.0335	0.333	7/25/2007 4:51:00 PM
3,3'-Dichlorobenzidine	ND	mg/Kg		0.0239	0.333	7/25/2007 4:51:00 PM
2,4-Dichlorophenol	ND	mg/Kg		0.0223	0.333	7/25/2007 4:51:00 PM
Diethyl phthalate	ND	mg/Kg		0.0214	0.333	7/25/2007 4:51:00 PM
Dimethyl phthalate	ND	mg/Kg		0.0250	0.333	7/25/2007 4:51:00 PM
2,4-Dimethylphenol	ND	mg/Kg		0.0301	0.333	7/25/2007 4:51:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.0226	0.333	7/25/2007 4:51:00 PM
2,4-Dinitrophenol	ND	mg/Kg		0.0391	0.333	7/25/2007 4:51:00 PM
2,4-Dinitrotoluene	ND	mg/Kg		0.0220	0.333	7/25/2007 4:51:00 PM
2,6-Dinitrotoluene	ND	mg/Kg		0.0302	0.333	7/25/2007 4:51:00 PM
Di-n-octyl phthalate	ND	mg/Kg		0.0466	0.333	7/25/2007 4:51:00 PM

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12B
Client Sample ID:	SM-SLURRY SOLIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/Kg		0.0226	0.333	7/25/2007 4:51:00 PM
Fluoranthene	0.078	mg/Kg	J	0.0278	0.333	7/25/2007 4:51:00 PM
Fluorene	0.327	mg/Kg	J	0.0208	0.333	7/25/2007 4:51:00 PM
Hexachlorobenzene	ND	mg/Kg		0.0223	0.333	7/25/2007 4:51:00 PM
Hexachlorobutadiene	ND	mg/Kg		0.0340	0.333	7/25/2007 4:51:00 PM
Hexachlorocyclopentadiene	ND	mg/Kg		0.0249	0.333	7/25/2007 4:51:00 PM
Hexachloroethane	ND	mg/Kg		0.0353	0.333	7/25/2007 4:51:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/Kg		0.0317	0.333	7/25/2007 4:51:00 PM
Isophorone	ND	mg/Kg		0.0236	0.333	7/25/2007 4:51:00 PM
Naphthalene	0.069	mg/Kg	J	0.0258	0.333	7/25/2007 4:51:00 PM
Nitrobenzene	ND	mg/Kg		0.0342	0.333	7/25/2007 4:51:00 PM
2-Nitrophenol	ND	mg/Kg		0.0309	0.333	7/25/2007 4:51:00 PM
4-Nitrophenol	ND	mg/Kg		0.0253	0.333	7/25/2007 4:51:00 PM
N-Nitrosodimethylamine	ND	mg/Kg		0.0318	0.333	7/25/2007 4:51:00 PM
N-Nitrosodiphenylamine	ND	mg/Kg		0.0230	0.333	7/25/2007 4:51:00 PM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.0301	0.333	7/25/2007 4:51:00 PM
Pentachlorophenol	ND	mg/Kg		0.0292	0.333	7/25/2007 4:51:00 PM
Phenanthrene	0.949	mg/Kg		0.0194	0.333	7/25/2007 4:51:00 PM
Phenol	ND	mg/Kg		0.0214	0.333	7/25/2007 4:51:00 PM
Pyrene	0.136	mg/Kg	J	0.0246	0.333	7/25/2007 4:51:00 PM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.0264	0.333	7/25/2007 4:51:00 PM
2,4,5-Trichlorophenol	ND	mg/Kg		0.0289	0.333	7/25/2007 4:51:00 PM
2,4,6-Trichlorophenol	ND	mg/Kg		0.0238	0.333	7/25/2007 4:51:00 PM
Surr: 2-Fluorophenol	70.6	%REC			29.1-120	7/25/2007 4:51:00 PM
Surr: Phenol-d5	71.8	%REC			36.1-163	7/25/2007 4:51:00 PM
Surr: 2,4,6-Tribromophenol	69.2	%REC			35.1-151	7/25/2007 4:51:00 PM
Surr: Nitrobenzene-d5	92.2	%REC			41.1-132	7/25/2007 4:51:00 PM
Surr: 2-Fluorobiphenyl	77.6	%REC			32.9-121	7/25/2007 4:51:00 PM
Surr: 4-Terphenyl-d14	116	%REC			50.9-145	7/25/2007 4:51:00 PM
TIC: 2-Propanol, 1-isopropoxy-2-methyl-	1.53	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: 9H-Flourene, 1-methyl-	0.723	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: 9H-Flourene, 2-methyl-	0.760	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: Anthracene, 2-methyl-	1.12	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: Heptane, 2,4-dimethyl-	0.671	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: Phenanthrene, 1-mehtyl-	0.854	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: Phenanthrene, 2,5-dimethyl-	0.742	mg/Kg		NA	NA	7/25/2007 4:51:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12B
Client Sample ID:	SM-SLURRY SOLIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Propanoic acid, 2-methyl-, 1-(1,1-dimethylethyl)-	1.31	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: Propanoic acid, 2-methyl-, 2-ethyl-3-hydroxyhexyl-	2.96	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
TIC: Tridecane	2.49	mg/Kg		NA	NA	7/25/2007 4:51:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/Kg		167	800	7/19/2007 3:20:00 PM
Acrolein	ND	µg/Kg		160	400	7/19/2007 3:20:00 PM
Acrylonitrile	ND	µg/Kg		127	400	7/19/2007 3:20:00 PM
Carbon disulfide	ND	µg/Kg		32.4	400	7/19/2007 3:20:00 PM
Iodomethane	ND	µg/Kg		55.5	400	7/19/2007 3:20:00 PM
Methyl tert-butyl ether	ND	µg/Kg		27.5	400	7/19/2007 3:20:00 PM
Vinyl acetate	ND	µg/Kg		180	400	7/19/2007 3:20:00 PM
Benzene	ND	µg/Kg		10.0	40.0	7/19/2007 3:20:00 PM
Bromobenzene	ND	µg/Kg		24.3	40.0	7/19/2007 3:20:00 PM
Bromochloromethane	ND	µg/Kg		10.2	40.0	7/19/2007 3:20:00 PM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	7/19/2007 3:20:00 PM
Bromoform	ND	µg/Kg		21.0	40.0	7/19/2007 3:20:00 PM
2-Butanone	ND	µg/Kg		159	400	7/19/2007 3:20:00 PM
Bromomethane	ND	µg/Kg		15.8	40.0	7/19/2007 3:20:00 PM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	7/19/2007 3:20:00 PM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	7/19/2007 3:20:00 PM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	7/19/2007 3:20:00 PM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	7/19/2007 3:20:00 PM
Chlorobenzene	ND	µg/Kg		13.3	40.0	7/19/2007 3:20:00 PM
Chloroethane	ND	µg/Kg		17.1	40.0	7/19/2007 3:20:00 PM
Chloroform	ND	µg/Kg		5.82	40.0	7/19/2007 3:20:00 PM
Chloromethane	ND	µg/Kg		7.52	40.0	7/19/2007 3:20:00 PM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	7/19/2007 3:20:00 PM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	7/19/2007 3:20:00 PM
Dibromochloromethane	ND	µg/Kg		10.7	40.0	7/19/2007 3:20:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	7/19/2007 3:20:00 PM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	7/19/2007 3:20:00 PM
Dibromomethane	ND	µg/Kg		13.3	40.0	7/19/2007 3:20:00 PM
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	7/19/2007 3:20:00 PM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	7/19/2007 3:20:00 PM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	7/19/2007 3:20:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12B
Client Sample ID:	SM-SLURRY SOLIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	7/19/2007 3:20:00 PM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	7/19/2007 3:20:00 PM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	7/19/2007 3:20:00 PM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	7/19/2007 3:20:00 PM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	7/19/2007 3:20:00 PM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	7/19/2007 3:20:00 PM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	7/19/2007 3:20:00 PM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	7/19/2007 3:20:00 PM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	7/19/2007 3:20:00 PM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	7/19/2007 3:20:00 PM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	7/19/2007 3:20:00 PM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	7/19/2007 3:20:00 PM
Ethylbenzene	ND	µg/Kg		13.4	40.0	7/19/2007 3:20:00 PM
2-Hexanone	ND	µg/Kg		79.1	400	7/19/2007 3:20:00 PM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	7/19/2007 3:20:00 PM
Isopropylbenzene	ND	µg/Kg		22.6	40.0	7/19/2007 3:20:00 PM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	7/19/2007 3:20:00 PM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	7/19/2007 3:20:00 PM
Methylene chloride	ND	µg/Kg		12.3	40.0	7/19/2007 3:20:00 PM
Naphthalene	ND	µg/Kg		27.7	40.0	7/19/2007 3:20:00 PM
n-Propylbenzene	ND	µg/Kg		13.1	40.0	7/19/2007 3:20:00 PM
Styrene	ND	µg/Kg		10.4	40.0	7/19/2007 3:20:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	7/19/2007 3:20:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	7/19/2007 3:20:00 PM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	7/19/2007 3:20:00 PM
Toluene	ND	µg/Kg		11.0	40.0	7/19/2007 3:20:00 PM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	7/19/2007 3:20:00 PM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	7/19/2007 3:20:00 PM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	7/19/2007 3:20:00 PM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	7/19/2007 3:20:00 PM
Trichloroethene	ND	µg/Kg		9.05	40.0	7/19/2007 3:20:00 PM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	7/19/2007 3:20:00 PM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	7/19/2007 3:20:00 PM
1,2,4-Trimethylbenzene	ND	µg/Kg		17.0	40.0	7/19/2007 3:20:00 PM
1,3,5-Trimethylbenzene	ND	µg/Kg		20.4	40.0	7/19/2007 3:20:00 PM
Vinyl chloride	ND	µg/Kg		10.6	40.0	7/19/2007 3:20:00 PM
o-Xylene	ND	µg/Kg		13.5	40.0	7/19/2007 3:20:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12B
Client Sample ID:	SM-SLURRY SOLIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
m,p-Xylene	ND	µg/Kg		28.3	80.0	7/19/2007 3:20:00 PM
Surr: 1,2-Dichloroethane-d4	87.2	%REC			72-120	7/19/2007 3:20:00 PM
Surr: 4-Bromofluorobenzene	201	%REC	S		74-121	7/19/2007 3:20:00 PM
Surr: Dibromofluoromethane	127	%REC	S		75-120	7/19/2007 3:20:00 PM
Surr: Toluene-d8	236	%REC	S		81-117	7/19/2007 3:20:00 PM
TIC: Decane	29.5	µg/Kg		NA	NA	7/19/2007 3:20:00 PM
TIC: Dodecane	28.2	µg/Kg		NA	NA	7/19/2007 3:20:00 PM
TIC: Methylcyclohexane	26.4	µg/Kg		NA	NA	7/19/2007 3:20:00 PM
TIC: Tridecane	18.1	µg/Kg		NA	NA	7/19/2007 3:20:00 PM

NOTES:
+ Spike recovery indicates matrix interference. The method is in control as indicated by the laboratory control sample (LCS).

CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	7/19/2007 2:45:00 PM
ANIONS BY IC, WATER SOLUBLE			**SW9056**			Analyst: **SB**
Chloride	ND	mg/Kg		1.00	1.00	7/30/2007 9:02:00 AM
Fluoride	ND	mg/Kg		1.00	1.00	7/30/2007 9:02:00 AM
Nitrogen, Nitrate	ND	mg/Kg		1.00	1.00	7/30/2007 9:02:00 AM
Nitrogen, Nitrite	ND	mg/Kg		1.00	5.00	7/30/2007 9:02:00 AM
Sulfate	9.35	mg/Kg	J	1.00	50.0	7/30/2007 9:02:00 AM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **DB**
Nitrogen, Ammonia	ND	mg/Kg		1.00	50.0	7/25/2007 9:00:00 AM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	6.49	wt%		0.010	0.01	7/19/2007 12:35:00 PM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	11.4	mg/kg		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	449	mg/kg		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	2.3	mg/kg		1.00	1.0	7/23/2007 1:09:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	451	mg/Kg		1.00	10.0	7/23/2007 1:09:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930 **Lab ID** 0707930-12B
Client Sample ID:	SM-SLURRY SOLIDS	**DateReceived:**	7/18/2007
Project:	CS STUDY	**Collection Date:**	7/17/2007 2:00:00 PM
Site ID:	WV	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
PH			**SW9045C**			Analyst: **DSA**
pH	7.63	SU		0	NA	7/20/2007 1:00:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930	**Lab ID**	0707930-13
Client Sample ID:	TRIP BLANK	**DateReceived:**	7/18/2007		
Project:	CS STUDY	**Collection Date:**	7/17/2007		
Site ID:	WV	**Matrix:**	LIQUID		

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/L		4.88	20.0	7/20/2007 9:11:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/20/2007 9:11:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/20/2007 9:11:00 PM
Benzene	ND	µg/L		0.13	1.0	7/20/2007 9:11:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/20/2007 9:11:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/20/2007 9:11:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/20/2007 9:11:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/20/2007 9:11:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/20/2007 9:11:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/20/2007 9:11:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/20/2007 9:11:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/20/2007 9:11:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/20/2007 9:11:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/20/2007 9:11:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/20/2007 9:11:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/20/2007 9:11:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/20/2007 9:11:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/20/2007 9:11:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/20/2007 9:11:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/20/2007 9:11:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/20/2007 9:11:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/20/2007 9:11:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/20/2007 9:11:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/20/2007 9:11:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/20/2007 9:11:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/20/2007 9:11:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/20/2007 9:11:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/20/2007 9:11:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/20/2007 9:11:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/20/2007 9:11:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/20/2007 9:11:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/20/2007 9:11:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/20/2007 9:11:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/20/2007 9:11:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/20/2007 9:11:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/20/2007 9:11:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/20/2007 9:11:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *21-Oct-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0707930	**Lab ID**	0707930-13
Client Sample ID:	TRIP BLANK	**DateReceived:**	7/18/2007		
Project:	CS STUDY	**Collection Date:**	7/17/2007		
Site ID:	WV	**Matrix:**	LIQUID		

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/20/2007 9:11:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 9:11:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/20/2007 9:11:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/20/2007 9:11:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/20/2007 9:11:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/20/2007 9:11:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/20/2007 9:11:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/20/2007 9:11:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/20/2007 9:11:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/20/2007 9:11:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/20/2007 9:11:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/20/2007 9:11:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/20/2007 9:11:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/20/2007 9:11:00 PM
Styrene	ND	µg/L		0.24	1.0	7/20/2007 9:11:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/20/2007 9:11:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/20/2007 9:11:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/20/2007 9:11:00 PM
Toluene	ND	µg/L		0.17	1.0	7/20/2007 9:11:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 9:11:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/20/2007 9:11:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/20/2007 9:11:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/20/2007 9:11:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/20/2007 9:11:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/20/2007 9:11:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/20/2007 9:11:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 9:11:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/20/2007 9:11:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/20/2007 9:11:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/20/2007 9:11:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/20/2007 9:11:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/20/2007 9:11:00 PM
Surr: 1,2-Dichloroethane-d4	103	%REC			80-120	7/20/2007 9:11:00 PM
Surr: 4-Bromofluorobenzene	95.8	%REC			86-115	7/20/2007 9:11:00 PM
Surr: Dibromofluoromethane	103	%REC			80-120	7/20/2007 9:11:00 PM
Surr: Toluene-d8	102	%REC			88-110	7/20/2007 9:11:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

Appendix II-P-2

Loadout, LLC

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

July 15, 2008

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: LL SLURRY

Order No.: 0806B82

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 4 sample(s) on 6/17/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason A. Clark

Jason Clark
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0806B82**
Date: **7/15/2008**

CLIENT: WV DEP - CHARLESTON
Project: LL SLURRY

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

The results for the DRO (SGT) samples are:

0806B82-01A - ND

0806B82-02A - ND

0806B82-03A - 516 MG/KG

0806B82-03L - ND

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0806B82**
Date: **7/15/2008**

CLIENT: WV DEP - CHARLESTON
Project: LL SLURRY
0806B82-04A - ND

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-2	**Lab ID:**	0806B82-01A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.073	mg/L	J	0.0200	0.100	6/23/2008 10:55:00 PM
Calcium	5.43	mg/L		0.100	0.500	6/23/2008 10:55:00 PM
Iron	0.092	mg/L	J	0.0200	0.100	6/23/2008 10:55:00 PM
Magnesium	3.62	mg/L		0.400	0.500	6/23/2008 10:55:00 PM
Manganese	0.025	mg/L	J	0.0010	0.050	6/23/2008 10:55:00 PM
Potassium	1.80	mg/L		0.300	1.00	6/25/2008 12:43:00 AM
Potassium	1.84	mg/L		0.300	1.00	6/23/2008 10:55:00 PM
Silicon	4.45	mg/L		0.0100	0.100	6/25/2008 2:43:00 PM
Sodium	2.61	mg/L		0.100	0.500	6/25/2008 12:43:00 AM
Zinc	0.006	mg/L	J	0.0030	0.050	6/23/2008 10:55:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	6/18/2008 12:57:37 PM
Arsenic	ND	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Barium	0.0296	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Beryllium	ND	mg/L		0.00020	0.0010	6/18/2008 12:57:37 PM
Cadmium	ND	mg/L		0.00020	0.0010	6/18/2008 12:57:37 PM
Chromium	ND	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Cobalt	ND	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Copper	ND	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Lead	ND	mg/L		0.00020	0.0010	6/18/2008 12:57:37 PM
Molybdenum	ND	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Nickel	ND	mg/L		0.00200	0.0100	6/18/2008 12:57:37 PM
Selenium	ND	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Silver	0.0005	mg/L	J	0.00020	0.0050	6/18/2008 12:57:37 PM
Strontium	0.0372	mg/L		0.00100	0.0050	6/18/2008 12:57:37 PM
Thallium	ND	mg/L		0.00020	0.0010	6/18/2008 12:57:37 PM
Vanadium	ND	mg/L		0.00100	0.0100	6/18/2008 12:57:37 PM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	6/25/2008 12:04:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	6/25/2008 10:51:03 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.049	0.11	6/24/2008 3:10:42 PM
TPH (Oil Range)	ND	mg/L		0.051	0.28	6/24/2008 3:10:42 PM
Surr: o-Terphenyl	84.8	%REC			30-130	6/24/2008 3:10:42 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-2	**Lab ID:**	0806B82-01A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		100	100	6/23/2008
Monoethylene Glycol	ND	mg/L		100	100	6/23/2008
Triethylene Glycol	ND	mg/L		100	100	6/23/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Acenaphthylene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Anthracene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Benzidine	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Benzo(a)anthracene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Benzo(a)pyrene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00626	0.0104	6/23/2008 2:38:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00522	0.0104	6/23/2008 2:38:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2-Chloronaphthalene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2-Chlorophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Chrysene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
o-Cresol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
m,p-Cresol	ND	mg/L		0.00522	0.0209	6/23/2008 2:38:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00313	0.0104	6/23/2008 2:38:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Diethyl phthalate	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Dimethyl phthalate	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-2
Project: LL SLURRY
Site ID:

WorkOrder: 0806B82
Lab ID: 0806B82-01A
Collection Date: 6/17/2008 10:25:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00522	0.0104	6/23/2008 2:38:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Fluoranthene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Fluorene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Hexachlorobenzene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Hexachlorobutadiene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Hexachloroethane	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Isophorone	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Naphthalene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Nitrobenzene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2-Nitrophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
4-Nitrophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Pentachlorophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Phenanthrene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Phenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Pyrene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00209	0.0104	6/23/2008 2:38:00 PM
Surr: 2-Fluorophenol	55.9	%REC			21-110	6/23/2008 2:38:00 PM
Surr: Phenol-d5	35.2	%REC			10-110	6/23/2008 2:38:00 PM
Surr: 2,4,6-Tribromophenol	102	%REC			10-123	6/23/2008 2:38:00 PM
Surr: Nitrobenzene-d5	93.2	%REC			35-114	6/23/2008 2:38:00 PM
Surr: 2-Fluorobiphenyl	91.2	%REC			43-116	6/23/2008 2:38:00 PM
Surr: 4-Terphenyl-d14	81.7	%REC			33-141	6/23/2008 2:38:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	6/23/2008 2:38:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-2
Project: LL SLURRY
Site ID:

WorkOrder: 0806B82
Lab ID: 0806B82-01A
Collection Date: 6/17/2008 10:25:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	6/19/2008 4:45:00 AM
Acrolein	ND	µg/L		4.36	10.0	6/19/2008 4:45:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	6/19/2008 4:45:00 AM
Benzene	ND	µg/L		0.13	1.0	6/19/2008 4:45:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	6/19/2008 4:45:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	6/19/2008 4:45:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	6/19/2008 4:45:00 AM
Bromoform	ND	µg/L		0.40	1.0	6/19/2008 4:45:00 AM
Bromomethane	ND	µg/L		0.50	1.0	6/19/2008 4:45:00 AM
2-Butanone	ND	µg/L		4.68	10.0	6/19/2008 4:45:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	6/19/2008 4:45:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	6/19/2008 4:45:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	6/19/2008 4:45:00 AM
Carbon disulfide	1.4	µg/L	J	1.27	10.0	6/19/2008 4:45:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	6/19/2008 4:45:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	6/19/2008 4:45:00 AM
Chloroethane	ND	µg/L		0.94	1.0	6/19/2008 4:45:00 AM
Chloroform	ND	µg/L		0.25	1.0	6/19/2008 4:45:00 AM
Chloromethane	ND	µg/L		0.33	1.0	6/19/2008 4:45:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	6/19/2008 4:45:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	6/19/2008 4:45:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	6/19/2008 4:45:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	6/19/2008 4:45:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	6/19/2008 4:45:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	6/19/2008 4:45:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	6/19/2008 4:45:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	6/19/2008 4:45:00 AM
1,4-Dichlorobenzene	1.4	µg/L		0.29	1.0	6/19/2008 4:45:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	6/19/2008 4:45:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	6/19/2008 4:45:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	6/19/2008 4:45:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	6/19/2008 4:45:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	6/19/2008 4:45:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	6/19/2008 4:45:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	6/19/2008 4:45:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	6/19/2008 4:45:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	6/19/2008 4:45:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-2	**Lab ID:**	0806B82-01A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	6/19/2008 4:45:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 4:45:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 4:45:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	6/19/2008 4:45:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	6/19/2008 4:45:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	6/19/2008 4:45:00 AM
Iodomethane	ND	µg/L		3.44	10.0	6/19/2008 4:45:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	6/19/2008 4:45:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	6/19/2008 4:45:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	6/19/2008 4:45:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	6/19/2008 4:45:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	6/19/2008 4:45:00 AM
Naphthalene	ND	µg/L		0.42	1.0	6/19/2008 4:45:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	6/19/2008 4:45:00 AM
Styrene	ND	µg/L		0.24	1.0	6/19/2008 4:45:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	6/19/2008 4:45:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	6/19/2008 4:45:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	6/19/2008 4:45:00 AM
Toluene	0.5	µg/L	J	0.17	1.0	6/19/2008 4:45:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 4:45:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 4:45:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	6/19/2008 4:45:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	6/19/2008 4:45:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	6/19/2008 4:45:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	6/19/2008 4:45:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	6/19/2008 4:45:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 4:45:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 4:45:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	6/19/2008 4:45:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	6/19/2008 4:45:00 AM
o-Xylene	ND	µg/L		0.19	1.0	6/19/2008 4:45:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	6/19/2008 4:45:00 AM
Surr: 1,2-Dichloroethane-d4	97.0	%REC			80-120	6/19/2008 4:45:00 AM
Surr: 4-Bromofluorobenzene	99.6	%REC			86-115	6/19/2008 4:45:00 AM
Surr: Dibromofluoromethane	127	%REC	S		80-120	6/19/2008 4:45:00 AM
Surr: Toluene-d8	103	%REC			88-110	6/19/2008 4:45:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	6/19/2008 4:45:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-2	**Lab ID:**	0806B82-01A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **JL**
Iron Related Bacteria	52,500	CFU/mL		NA	100	6/17/2008 4:15:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **BS**
Sulfate Reducing Bacteria	2,550	CFU/mL		NA	100	6/17/2008 4:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	6/19/2008 10:15:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.11	mg/L		0.050	0.10	6/18/2008 3:32:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	6/18/2008 3:32:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	0.94	mg/L	J	0.100	1.00	6/24/2008 3:05:00 PM
Fluoride	0.14	mg/L	J	0.050	0.20	6/24/2008 3:05:00 PM
Sulfate	16.1	mg/L		0.700	5.00	6/24/2008 3:05:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.030	0.10	6/18/2008 10:00:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 9:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 1:00:00 PM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	69.3	µmhos/cm		NA	NA	6/18/2008 6:25:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	7	mg/L		1.0	1	6/18/2008 6:40:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	2	mg/L		1.0	1	6/18/2008 7:30:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	1.5	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	17.5	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	6/20/2008 10:22:00 AM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-2	**Lab ID:**	0806B82-01A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	17.5	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.86	SU		NA	NA	6/20/2008 10:22:00 AM

Key:				
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	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-2/FIELD FILTERED	**Lab ID:**	0806B82-01B
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.077	mg/L	J	0.0200	0.100	6/23/2008 11:12:00 PM
Calcium	5.40	mg/L		0.100	0.500	6/23/2008 11:12:00 PM
Iron	0.072	mg/L	J	0.0200	0.100	6/23/2008 11:12:00 PM
Magnesium	3.42	mg/L		0.400	0.500	6/23/2008 11:12:00 PM
Manganese	0.023	mg/L	J	0.0010	0.050	6/23/2008 11:12:00 PM
Potassium	1.91	mg/L		0.300	1.00	6/25/2008 12:49:00 AM
Silicon	4.52	mg/L		0.0100	0.100	6/25/2008 2:54:00 PM
Sodium	2.78	mg/L		0.100	0.500	6/25/2008 12:49:00 AM
Zinc	0.013	mg/L	J	0.0030	0.050	6/23/2008 11:12:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	6/18/2008 1:15:08 PM
Arsenic	ND	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Barium	0.0287	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Beryllium	ND	mg/L		0.00020	0.0010	6/18/2008 1:15:08 PM
Cadmium	ND	mg/L		0.00020	0.0010	6/18/2008 1:15:08 PM
Chromium	ND	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Cobalt	ND	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Copper	ND	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Lead	ND	mg/L		0.00020	0.0010	6/18/2008 1:15:08 PM
Molybdenum	ND	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Nickel	ND	mg/L		0.00200	0.0100	6/18/2008 1:15:08 PM
Selenium	ND	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	6/18/2008 1:15:08 PM
Strontium	0.0363	mg/L		0.00100	0.0050	6/18/2008 1:15:08 PM
Thallium	ND	mg/L		0.00020	0.0010	6/18/2008 1:15:08 PM
Vanadium	ND	mg/L		0.00100	0.0100	6/18/2008 1:15:08 PM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	6/25/2008 12:08:00 PM

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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-3	**Lab ID:**	0806B82-02A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:55:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.206	mg/L		0.0200	0.100	6/23/2008 11:18:00 PM
Calcium	30.1	mg/L		0.100	0.500	6/23/2008 11:18:00 PM
Iron	0.288	mg/L		0.0200	0.100	6/23/2008 11:18:00 PM
Magnesium	12.6	mg/L		0.400	0.500	6/23/2008 11:18:00 PM
Manganese	0.327	mg/L		0.0010	0.050	6/23/2008 11:18:00 PM
Potassium	5.41	mg/L		0.300	1.00	6/25/2008 12:55:00 AM
Silicon	5.98	mg/L		0.0100	0.100	6/25/2008 3:20:00 PM
Sodium	63.4	mg/L		0.100	0.500	6/25/2008 12:55:00 AM
Zinc	0.061	mg/L		0.0030	0.050	6/23/2008 11:18:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	6/18/2008 1:20:58 PM
Arsenic	ND	mg/L		0.00100	0.0050	6/18/2008 1:20:58 PM
Barium	0.0327	mg/L		0.00100	0.0050	6/18/2008 1:20:58 PM
Beryllium	ND	mg/L		0.00020	0.0010	6/18/2008 1:20:58 PM
Cadmium	ND	mg/L		0.00020	0.0010	6/18/2008 1:20:58 PM
Chromium	ND	mg/L		0.00100	0.0050	6/18/2008 1:20:58 PM
Cobalt	ND	mg/L		0.00100	0.0050	6/18/2008 1:20:58 PM
Copper	ND	mg/L		0.00100	0.0050	6/18/2008 1:20:58 PM
Lead	ND	mg/L		0.00020	0.0010	6/18/2008 1:20:58 PM
Molybdenum	0.0017	mg/L	J	0.00100	0.0050	6/18/2008 1:20:58 PM
Nickel	0.0024	mg/L	J	0.00200	0.0100	6/18/2008 1:20:58 PM
Selenium	0.0052	mg/L		0.00100	0.0050	6/18/2008 1:20:58 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	6/18/2008 1:20:58 PM
Strontium	0.298	mg/L		0.00100	0.0050	6/18/2008 1:20:58 PM
Thallium	ND	mg/L		0.00020	0.0010	6/18/2008 1:20:58 PM
Vanadium	ND	mg/L		0.00100	0.0100	6/18/2008 1:20:58 PM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	6/25/2008 12:09:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	6/25/2008 11:03:39 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.048	0.11	6/24/2008 3:45:13 PM
TPH (Oil Range)	ND	mg/L		0.050	0.27	6/24/2008 3:45:13 PM
Surr: o-Terphenyl	90.9	%REC			30-130	6/24/2008 3:45:13 PM

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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-3	**Lab ID:**	0806B82-02A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:55:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		100	100	6/23/2008
Monoethylene Glycol	ND	mg/L		100	100	6/23/2008
Triethylene Glycol	ND	mg/L		100	100	6/23/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Acenaphthylene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Anthracene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Benzidine	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Benzo(a)anthracene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Benzo(a)pyrene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00617	0.0103	6/23/2008 3:09:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00514	0.0103	6/23/2008 3:09:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2-Chloronaphthalene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2-Chlorophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Chrysene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
o-Cresol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
m,p-Cresol	ND	mg/L		0.00514	0.0206	6/23/2008 3:09:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00308	0.0103	6/23/2008 3:09:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Diethyl phthalate	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Dimethyl phthalate	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-3
Project: LL SLURRY
Site ID:

WorkOrder: 0806B82
Lab ID: 0806B82-02A
Collection Date: 6/17/2008 10:55:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00514	0.0103	6/23/2008 3:09:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Fluoranthene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Fluorene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Hexachlorobenzene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Hexachlorobutadiene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Hexachloroethane	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Isophorone	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Naphthalene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Nitrobenzene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2-Nitrophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
4-Nitrophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Pentachlorophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Phenanthrene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Phenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Pyrene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00206	0.0103	6/23/2008 3:09:00 PM
Surr: 2-Fluorophenol	54.5	%REC			21-110	6/23/2008 3:09:00 PM
Surr: Phenol-d5	34.3	%REC			10-110	6/23/2008 3:09:00 PM
Surr: 2,4,6-Tribromophenol	101	%REC			10-123	6/23/2008 3:09:00 PM
Surr: Nitrobenzene-d5	92.4	%REC			35-114	6/23/2008 3:09:00 PM
Surr: 2-Fluorobiphenyl	91.0	%REC			43-116	6/23/2008 3:09:00 PM
Surr: 4-Terphenyl-d14	83.7	%REC			33-141	6/23/2008 3:09:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	6/23/2008 3:09:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-3	**Lab ID:**	0806B82-02A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:55:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	6/19/2008 5:18:00 AM
Acrolein	ND	µg/L		4.36	10.0	6/19/2008 5:18:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	6/19/2008 5:18:00 AM
Benzene	ND	µg/L		0.13	1.0	6/19/2008 5:18:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	6/19/2008 5:18:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	6/19/2008 5:18:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	6/19/2008 5:18:00 AM
Bromoform	ND	µg/L		0.40	1.0	6/19/2008 5:18:00 AM
Bromomethane	ND	µg/L		0.50	1.0	6/19/2008 5:18:00 AM
2-Butanone	ND	µg/L		4.68	10.0	6/19/2008 5:18:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	6/19/2008 5:18:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	6/19/2008 5:18:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	6/19/2008 5:18:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	6/19/2008 5:18:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	6/19/2008 5:18:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	6/19/2008 5:18:00 AM
Chloroethane	ND	µg/L		0.94	1.0	6/19/2008 5:18:00 AM
Chloroform	ND	µg/L		0.25	1.0	6/19/2008 5:18:00 AM
Chloromethane	ND	µg/L		0.33	1.0	6/19/2008 5:18:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	6/19/2008 5:18:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	6/19/2008 5:18:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	6/19/2008 5:18:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	6/19/2008 5:18:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	6/19/2008 5:18:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	6/19/2008 5:18:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	6/19/2008 5:18:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	6/19/2008 5:18:00 AM
1,4-Dichlorobenzene	1.2	µg/L		0.29	1.0	6/19/2008 5:18:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	6/19/2008 5:18:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	6/19/2008 5:18:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	6/19/2008 5:18:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	6/19/2008 5:18:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	6/19/2008 5:18:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	6/19/2008 5:18:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	6/19/2008 5:18:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	6/19/2008 5:18:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	6/19/2008 5:18:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-3
Project: LL SLURRY
Site ID:

WorkOrder: 0806B82
Lab ID: 0806B82-02A
Collection Date: 6/17/2008 10:55:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	6/19/2008 5:18:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 5:18:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 5:18:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	6/19/2008 5:18:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	6/19/2008 5:18:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	6/19/2008 5:18:00 AM
Iodomethane	ND	µg/L		3.44	10.0	6/19/2008 5:18:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	6/19/2008 5:18:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	6/19/2008 5:18:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	6/19/2008 5:18:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	6/19/2008 5:18:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	6/19/2008 5:18:00 AM
Naphthalene	ND	µg/L		0.42	1.0	6/19/2008 5:18:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	6/19/2008 5:18:00 AM
Styrene	ND	µg/L		0.24	1.0	6/19/2008 5:18:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	6/19/2008 5:18:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	6/19/2008 5:18:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	6/19/2008 5:18:00 AM
Toluene	0.3	µg/L	J	0.17	1.0	6/19/2008 5:18:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 5:18:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 5:18:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	6/19/2008 5:18:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	6/19/2008 5:18:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	6/19/2008 5:18:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	6/19/2008 5:18:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	6/19/2008 5:18:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 5:18:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 5:18:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	6/19/2008 5:18:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	6/19/2008 5:18:00 AM
o-Xylene	ND	µg/L		0.19	1.0	6/19/2008 5:18:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	6/19/2008 5:18:00 AM
Surr: 1,2-Dichloroethane-d4	101	%REC			80-120	6/19/2008 5:18:00 AM
Surr: 4-Bromofluorobenzene	97.4	%REC			86-115	6/19/2008 5:18:00 AM
Surr: Dibromofluoromethane	119	%REC			80-120	6/19/2008 5:18:00 AM
Surr: Toluene-d8	102	%REC			88-110	6/19/2008 5:18:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	6/19/2008 5:18:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-3	**Lab ID:**	0806B82-02A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:55:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **JL**
Iron Related Bacteria	52,500	CFU/mL		NA	100	6/17/2008 4:15:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **JL**
Sulfate Reducing Bacteria	52,500	CFU/mL		NA	100	6/17/2008 4:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	6/19/2008 10:15:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.56	mg/L		0.050	0.10	6/18/2008 3:50:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	6/18/2008 3:50:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	9.50	mg/L		0.100	1.00	6/24/2008 3:05:00 PM
Fluoride	0.28	mg/L		0.050	0.20	6/24/2008 3:05:00 PM
Sulfate	189	mg/L		0.700	5.00	6/24/2008 3:05:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.030	0.10	6/18/2008 10:00:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 9:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 1:00:00 PM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	608	µmhos/cm		NA	NA	6/18/2008 6:25:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	279	mg/L		1.0	1	6/18/2008 6:40:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	3	mg/L		1.0	1	6/18/2008 7:30:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	1.8	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	59.9	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	6/20/2008 10:22:00 AM

Key:

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-3	**Lab ID:**	0806B82-02A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:55:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	60.1	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.57	SU		NA	NA	6/20/2008 10:22:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-3/FIELD FILTERED	**Lab ID:**	0806B82-02B
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:55:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.163	mg/L		0.0200	0.100	6/23/2008 11:24:00 PM
Calcium	29.9	mg/L		0.100	0.500	6/23/2008 11:24:00 PM
Iron	0.124	mg/L		0.0200	0.100	6/23/2008 11:24:00 PM
Magnesium	12.9	mg/L		0.400	0.500	6/23/2008 11:24:00 PM
Manganese	0.285	mg/L		0.0010	0.050	6/23/2008 11:24:00 PM
Potassium	5.52	mg/L		0.300	1.00	6/25/2008 1:01:00 AM
Silicon	3.21	mg/L		0.0100	0.100	6/25/2008 3:26:00 PM
Sodium	64.7	mg/L		0.100	0.500	6/25/2008 1:01:00 AM
Zinc	0.004	mg/L	J	0.0030	0.050	6/23/2008 11:24:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	6/18/2008 1:26:48 PM
Arsenic	ND	mg/L		0.00100	0.0050	6/18/2008 1:26:48 PM
Barium	0.0324	mg/L		0.00100	0.0050	6/18/2008 1:26:48 PM
Beryllium	ND	mg/L		0.00020	0.0010	6/18/2008 1:26:48 PM
Cadmium	ND	mg/L		0.00020	0.0010	6/18/2008 1:26:48 PM
Chromium	ND	mg/L		0.00100	0.0050	6/18/2008 1:26:48 PM
Cobalt	ND	mg/L		0.00100	0.0050	6/18/2008 1:26:48 PM
Copper	ND	mg/L		0.00100	0.0050	6/18/2008 1:26:48 PM
Lead	ND	mg/L		0.00020	0.0010	6/18/2008 1:26:48 PM
Molybdenum	0.0017	mg/L	J	0.00100	0.0050	6/18/2008 1:26:48 PM
Nickel	0.0022	mg/L	J	0.00200	0.0100	6/18/2008 1:26:48 PM
Selenium	0.0051	mg/L		0.00100	0.0050	6/18/2008 1:26:48 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	6/18/2008 1:26:48 PM
Strontium	0.306	mg/L		0.00100	0.0050	6/18/2008 1:26:48 PM
Thallium	ND	mg/L		0.00020	0.0010	6/18/2008 1:26:48 PM
Vanadium	ND	mg/L		0.00100	0.0100	6/18/2008 1:26:48 PM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	6/25/2008 12:11:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL	**Lab ID:**	0806B82-03A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010B**			Analyst: **JD**
Aluminum	1,170	mg/Kg		0.200	2.50	6/23/2008 6:21:00 PM
Antimony	ND	mg/Kg		1.50	5.00	6/23/2008 6:21:00 PM
Arsenic	1.56	mg/Kg	J	1.50	5.00	6/23/2008 6:21:00 PM
Barium	19.9	mg/Kg		0.100	2.50	6/23/2008 6:21:00 PM
Beryllium	0.544	mg/Kg		0.0200	0.250	6/23/2008 6:21:00 PM
Cadmium	0.0692	mg/Kg	J	0.0500	0.500	6/23/2008 6:21:00 PM
Calcium	453	mg/Kg		2.50	25.0	6/23/2008 6:21:00 PM
Chromium	5.98	mg/Kg		0.100	2.50	6/23/2008 6:21:00 PM
Cobalt	3.80	mg/Kg		0.100	2.50	6/23/2008 6:21:00 PM
Copper	9.88	mg/Kg		0.200	2.50	6/23/2008 6:21:00 PM
Iron	1,480	mg/Kg		0.500	2.50	6/23/2008 6:21:00 PM
Lead	5.67	mg/Kg		0.500	5.00	6/23/2008 6:21:00 PM
Magnesium	382	mg/Kg		2.50	12.0	6/23/2008 6:21:00 PM
Manganese	13.5	mg/Kg		0.0500	2.50	6/23/2008 6:21:00 PM
Molybdenum	0.610	mg/Kg	J	0.200	2.50	6/23/2008 6:21:00 PM
Nickel	6.80	mg/Kg		0.200	2.50	6/23/2008 6:21:00 PM
Potassium	451	mg/Kg		2.50	12.0	6/23/2008 6:21:00 PM
Selenium	1.96	mg/Kg	J	0.500	5.00	6/23/2008 6:21:00 PM
Silicon	77.5	mg/Kg		0.500	2.50	6/25/2008 1:49:00 PM
Silver	ND	mg/Kg		0.100	2.50	6/23/2008 6:21:00 PM
Sodium	48.1	mg/Kg		2.50	25.0	6/23/2008 6:21:00 PM
Strontium	13.4	mg/Kg		0.100	2.50	6/24/2008 2:22:00 PM
Thallium	ND	mg/Kg		0.500	5.00	6/23/2008 6:21:00 PM
Vanadium	7.93	mg/Kg		0.200	2.50	6/23/2008 6:21:00 PM
Zinc	16.5	mg/Kg		0.200	2.50	6/23/2008 6:21:00 PM
MERCURY, TOTAL			**SW7471A**			Analyst: **DL**
Mercury	0.052	mg/Kg		0.0100	0.050	6/25/2008 3:31:00 PM
PERCENT MOISTURE			**SM2540 B**			Analyst: **FF**
Percent Moisture	2.0	wt%		0.01	0.5	7/1/2008
OIL AND GREASE			**SW9071**			Analyst: **TM**
Oil & Grease, Total Recoverable	0.035	wt%-dry		0.0010	0.010	7/2/2008
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	746	mg/Kg		2.41	4.00	6/28/2008 2:48:06 AM
TPH (Oil Range)	525	mg/Kg		1.04	10.0	6/28/2008 2:48:06 AM
Surr: o-Terphenyl	113	%REC			30-130	6/28/2008 2:48:06 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL	**Lab ID:**	0806B82-03A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/Kg		100	100	7/1/2008
Ethylene Glycol	ND	mg/Kg		100	100	7/1/2008
Triethylene Glycol	ND	mg/Kg		100	100	7/1/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	0.227	mg/Kg	J	0.0650	0.333	6/24/2008 9:55:00 PM
Acenaphthylene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Anthracene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Benzidine	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Benzo(a)anthracene	0.563	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Benzo(a)pyrene	0.834	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Benzo(b)fluoranthene	0.859	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Benzo(g,h,i)perylene	2.07	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Benzo(k)fluoranthene	0.298	mg/Kg	J	0.0650	0.333	6/24/2008 9:55:00 PM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Bis(2-ethylhexyl)phthalate	0.239	mg/Kg	J	0.200	0.333	6/24/2008 9:55:00 PM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Butyl benzyl phthalate	ND	mg/Kg		0.150	0.333	6/24/2008 9:55:00 PM
4-Chloro-3-methylphenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2-Chloronaphthalene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2-Chlorophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Chrysene	0.760	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
o-Cresol	0.434	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
m,p-Cresol	0.428	mg/Kg	J	0.108	0.666	6/24/2008 9:55:00 PM
Dibenzo(a,h)anthracene	0.251	mg/Kg	J	0.0650	0.333	6/24/2008 9:55:00 PM
Di-n-butyl phthalate	ND	mg/Kg		0.150	0.333	6/24/2008 9:55:00 PM
1,2-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
1,3-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
1,4-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
3,3'-Dichlorobenzidine	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2,4-Dichlorophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Diethyl phthalate	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Dimethyl phthalate	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2,4-Dimethylphenol	1.24	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL	**Lab ID:**	0806B82-03A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2,4-Dinitrophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2,4-Dinitrotoluene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2,6-Dinitrotoluene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Di-n-octyl phthalate	ND	mg/Kg		0.150	0.333	6/24/2008 9:55:00 PM
1,2-Diphenylhydrazine	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Fluoranthene	0.525	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Fluorene	0.675	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Hexachlorobenzene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Hexachlorobutadiene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Hexachlorocyclopentadiene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Hexachloroethane	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Indeno(1,2,3-cd)pyrene	0.371	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Isophorone	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Naphthalene	9.61	mg/Kg		0.650	3.33	6/26/2008 2:12:00 PM
Nitrobenzene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2-Nitrophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
4-Nitrophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
N-Nitrosodimethylamine	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
N-Nitrosodiphenylamine	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Pentachlorophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Phenanthrene	3.77	mg/Kg		0.650	3.33	6/26/2008 2:12:00 PM
Phenol	0.087	mg/Kg	J	0.0650	0.333	6/24/2008 9:55:00 PM
Pyrene	0.966	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2,4,5-Trichlorophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
2,4,6-Trichlorophenol	ND	mg/Kg		0.0650	0.333	6/24/2008 9:55:00 PM
Surr: 2-Fluorophenol	56.0	%REC			29.1-120	6/24/2008 9:55:00 PM
Surr: Phenol-d5	55.0	%REC			36.1-163	6/24/2008 9:55:00 PM
Surr: 2,4,6-Tribromophenol	67.1	%REC			35.1-151	6/24/2008 9:55:00 PM
Surr: Nitrobenzene-d5	89.0	%REC			41.1-132	6/24/2008 9:55:00 PM
Surr: 2-Fluorobiphenyl	80.3	%REC			32.9-121	6/24/2008 9:55:00 PM
Surr: 4-Terphenyl-d14	76.4	%REC			50.9-145	6/24/2008 9:55:00 PM
TIC: Heptacosane	1.56	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Hexacosane	1.33	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Naphthalene, 1,2-dimethyl-	1.19	mg/Kg		0	0	6/24/2008 9:55:00 PM

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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL	**Lab ID:**	0806B82-03A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Naphthalene, 1,4-dimethyl-	1.08	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Naphthalene, 1,7-dimethyl-	1.63	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Naphthelene, 1,5-dimethyl-	1.07	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Pentacosane	1.94	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Pentadecane, 2,6,10,14-tetramethyl-	1.79	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Tetracosane	1.71	mg/Kg		0	0	6/24/2008 9:55:00 PM
TIC: Tricosane	1.62	mg/Kg		0	0	6/24/2008 9:55:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/Kg		167	800	6/23/2008 12:33:00 PM
Acrolein	ND	µg/Kg		160	400	6/23/2008 12:33:00 PM
Acrylonitrile	ND	µg/Kg		127	400	6/23/2008 12:33:00 PM
Carbon disulfide	36.7	µg/Kg	J	32.4	400	6/23/2008 12:33:00 PM
Iodomethane	ND	µg/Kg		55.5	400	6/23/2008 12:33:00 PM
Methyl tert-butyl ether	ND	µg/Kg		27.5	400	6/23/2008 12:33:00 PM
Vinyl acetate	ND	µg/Kg		180	400	6/23/2008 12:33:00 PM
Benzene	16.6	µg/Kg	J	10.0	40.0	6/23/2008 12:33:00 PM
Bromobenzene	ND	µg/Kg		24.3	40.0	6/23/2008 12:33:00 PM
Bromochloromethane	ND	µg/Kg		10.2	40.0	6/23/2008 12:33:00 PM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	6/23/2008 12:33:00 PM
Bromoform	ND	µg/Kg		21.0	40.0	6/23/2008 12:33:00 PM
2-Butanone	ND	µg/Kg		159	400	6/23/2008 12:33:00 PM
Bromomethane	ND	µg/Kg		15.8	40.0	6/23/2008 12:33:00 PM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	6/23/2008 12:33:00 PM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	6/23/2008 12:33:00 PM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	6/23/2008 12:33:00 PM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	6/23/2008 12:33:00 PM
Chlorobenzene	ND	µg/Kg		13.3	40.0	6/23/2008 12:33:00 PM
Chloroethane	ND	µg/Kg		17.1	40.0	6/23/2008 12:33:00 PM
Chloroform	ND	µg/Kg		5.82	40.0	6/23/2008 12:33:00 PM
Chloromethane	ND	µg/Kg		7.52	40.0	6/23/2008 12:33:00 PM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	6/23/2008 12:33:00 PM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	6/23/2008 12:33:00 PM
Dibromochloromethane	ND	µg/Kg		10.7	40.0	6/23/2008 12:33:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	6/23/2008 12:33:00 PM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	6/23/2008 12:33:00 PM
Dibromomethane	ND	µg/Kg		13.3	40.0	6/23/2008 12:33:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL	**Lab ID:**	0806B82-03A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	6/23/2008 12:33:00 PM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	6/23/2008 12:33:00 PM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	6/23/2008 12:33:00 PM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	6/23/2008 12:33:00 PM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	6/23/2008 12:33:00 PM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	6/23/2008 12:33:00 PM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	6/23/2008 12:33:00 PM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	6/23/2008 12:33:00 PM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	6/23/2008 12:33:00 PM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	6/23/2008 12:33:00 PM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	6/23/2008 12:33:00 PM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	6/23/2008 12:33:00 PM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	6/23/2008 12:33:00 PM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	6/23/2008 12:33:00 PM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	6/23/2008 12:33:00 PM
Ethylbenzene	24.9	µg/Kg	J	13.4	40.0	6/23/2008 12:33:00 PM
2-Hexanone	ND	µg/Kg		79.1	400	6/23/2008 12:33:00 PM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	6/23/2008 12:33:00 PM
Isopropylbenzene	62.2	µg/Kg		22.6	40.0	6/23/2008 12:33:00 PM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	6/23/2008 12:33:00 PM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	6/23/2008 12:33:00 PM
Methylene chloride	ND	µg/Kg		12.3	40.0	6/23/2008 12:33:00 PM
Naphthalene	ND	µg/Kg		27.7	40.0	6/23/2008 12:33:00 PM
n-Propylbenzene	ND	µg/Kg		13.1	40.0	6/23/2008 12:33:00 PM
Styrene	ND	µg/Kg		10.4	40.0	6/23/2008 12:33:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	6/23/2008 12:33:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	6/23/2008 12:33:00 PM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	6/23/2008 12:33:00 PM
Toluene	205	µg/Kg		11.0	40.0	6/23/2008 12:33:00 PM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	6/23/2008 12:33:00 PM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	6/23/2008 12:33:00 PM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	6/23/2008 12:33:00 PM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	6/23/2008 12:33:00 PM
Trichloroethene	ND	µg/Kg		9.05	40.0	6/23/2008 12:33:00 PM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	6/23/2008 12:33:00 PM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	6/23/2008 12:33:00 PM
1,2,4-Trimethylbenzene	64.1	µg/Kg		17.0	40.0	6/23/2008 12:33:00 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL	**Lab ID:**	0806B82-03A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,3,5-Trimethylbenzene	60.1	µg/Kg		20.4	40.0	6/23/2008 12:33:00 PM
Vinyl chloride	ND	µg/Kg		10.6	40.0	6/23/2008 12:33:00 PM
o-Xylene	53.0	µg/Kg		13.5	40.0	6/23/2008 12:33:00 PM
m,p-Xylene	92.6	µg/Kg		28.3	80.0	6/23/2008 12:33:00 PM
Surr: 1,2-Dichloroethane-d4	104	%REC			72-120	6/23/2008 12:33:00 PM
Surr: 4-Bromofluorobenzene	214	%REC	S		74-121	6/23/2008 12:33:00 PM
Surr: Dibromofluoromethane	123	%REC	S		75-120	6/23/2008 12:33:00 PM
Surr: Toluene-d8	140	%REC	S		81-117	6/23/2008 12:33:00 PM
TIC: 2,3-dimethyl-2-pentene	63.6	µg/Kg		NA	NA	6/23/2008 12:33:00 PM
TIC: 2-methyl butane	64.2	µg/Kg		NA	NA	6/23/2008 12:33:00 PM
TIC: 2-methyl propane	118	µg/Kg		NA	NA	6/23/2008 12:33:00 PM
TIC: cyclyohexane	104	µg/Kg		NA	NA	6/23/2008 12:33:00 PM

NOTES:
Surrogate recovery was not within method criteria due to matrix interference.
Elevated PQLs are due to matrix interference.

CYANIDE			**SW9010/9012A**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	6/26/2008 9:45:00 AM
ANIONS BY 5050/9056			**SW5050/9056**			Analyst: **SB**
Chloride	306	mg/Kg		0.200	100	6/30/2008 10:00:00 AM
Fluoride	ND	mg/Kg		0.020	10.0	6/30/2008 10:00:00 AM
Nitrogen, Nitrate	ND	mg/Kg		0.050	10.0	6/30/2008 10:00:00 AM
Nitrogen, Nitrite	ND	mg/Kg		0.050	0.50	6/30/2008 10:00:00 AM
Sulfate	577	mg/Kg		1.00	500	6/30/2008 10:00:00 AM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JL**
Nitrogen, Ammonia	31.9	mg/Kg	J	0.700	50.0	6/30/2008 1:00:00 PM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	98.7	wt%		0.010	0.01	6/19/2008 6:40:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	652	mg/Kg		1.00	10.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	7.7	mg/Kg	J	1.00	10.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	660	mg/Kg		1.00	10.0	6/20/2008 10:22:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL	**Lab ID:**	0806B82-03A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
PH			**SW9045C**			Analyst: **DSA**
pH	8.10	SU		NA	NA	6/20/2008 10:22:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-COAL (LEACHATE)
Project: LL SLURRY
Site ID:

WorkOrder: 0806B82
Lab ID: 0806B82-03L
Collection Date: 6/17/2008 9:55:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	6/25/2008 11:16:17 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.052	0.12	6/24/2008 4:20:51 PM
TPH (Oil Range)	ND	mg/L		0.055	0.30	6/24/2008 4:20:51 PM
Surr: o-Terphenyl	84.9	%REC			30-130	6/24/2008 4:20:51 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		100	100	6/23/2008
Monoethylene Glycol	ND	mg/L		100	100	6/23/2008
Triethylene Glycol	ND	mg/L		100	100	6/23/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Acenaphthylene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Anthracene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Benzidine	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Benzo(a)anthracene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Benzo(a)pyrene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00732	0.0122	6/23/2008 3:39:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00610	0.0122	6/23/2008 3:39:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2-Chloronaphthalene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2-Chlorophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Chrysene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
o-Cresol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
m,p-Cresol	ND	mg/L		0.00610	0.0244	6/23/2008 3:39:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00366	0.0122	6/23/2008 3:39:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL (LEACHATE)	**Lab ID:**	0806B82-03L
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,3-Dichlorobenzene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Diethyl phthalate	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Dimethyl phthalate	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00610	0.0122	6/23/2008 3:39:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Fluoranthene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Fluorene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Hexachlorobenzene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Hexachlorobutadiene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Hexachloroethane	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Isophorone	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Naphthalene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Nitrobenzene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2-Nitrophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
4-Nitrophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Pentachlorophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Phenanthrene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Phenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Pyrene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00244	0.0122	6/23/2008 3:39:00 PM
Surr: 2-Fluorophenol	61.1	%REC			21-110	6/23/2008 3:39:00 PM
Surr: Phenol-d5	40.7	%REC			10-110	6/23/2008 3:39:00 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL (LEACHATE)	**Lab ID:**	0806B82-03L
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Surr: 2,4,6-Tribromophenol	99.4	%REC			10-123	6/23/2008 3:39:00 PM
Surr: Nitrobenzene-d5	93.3	%REC			35-114	6/23/2008 3:39:00 PM
Surr: 2-Fluorobiphenyl	93.2	%REC			43-116	6/23/2008 3:39:00 PM
Surr: 4-Terphenyl-d14	73.9	%REC			33-141	6/23/2008 3:39:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	6/23/2008 3:39:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	14.8	µg/L	J	4.88	20.0	6/19/2008 7:13:00 PM
Acrolein	ND	µg/L		4.36	10.0	6/19/2008 7:13:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	6/19/2008 7:13:00 PM
Benzene	ND	µg/L		0.13	1.0	6/19/2008 7:13:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	6/19/2008 7:13:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	6/19/2008 7:13:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	6/19/2008 7:13:00 PM
Bromoform	ND	µg/L		0.40	1.0	6/19/2008 7:13:00 PM
Bromomethane	ND	µg/L		0.50	1.0	6/19/2008 7:13:00 PM
2-Butanone	ND	µg/L		4.68	10.0	6/19/2008 7:13:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	6/19/2008 7:13:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	6/19/2008 7:13:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	6/19/2008 7:13:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	6/19/2008 7:13:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	6/19/2008 7:13:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	6/19/2008 7:13:00 PM
Chloroethane	ND	µg/L		0.94	1.0	6/19/2008 7:13:00 PM
Chloroform	ND	µg/L		0.25	1.0	6/19/2008 7:13:00 PM
Chloromethane	ND	µg/L		0.33	1.0	6/19/2008 7:13:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	6/19/2008 7:13:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	6/19/2008 7:13:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	6/19/2008 7:13:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	6/19/2008 7:13:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	6/19/2008 7:13:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	6/19/2008 7:13:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	6/19/2008 7:13:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	6/19/2008 7:13:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	6/19/2008 7:13:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	6/19/2008 7:13:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	6/19/2008 7:13:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL (LEACHATE)	**Lab ID:**	0806B82-03L
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,2-Dichloroethane	ND	µg/L		0.43	1.0	6/19/2008 7:13:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	6/19/2008 7:13:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	6/19/2008 7:13:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	6/19/2008 7:13:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	6/19/2008 7:13:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	6/19/2008 7:13:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	6/19/2008 7:13:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	6/19/2008 7:13:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 7:13:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 7:13:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	6/19/2008 7:13:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	6/19/2008 7:13:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	6/19/2008 7:13:00 PM
Iodomethane	ND	µg/L		3.44	10.0	6/19/2008 7:13:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	6/19/2008 7:13:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	6/19/2008 7:13:00 PM
Methylene chloride	1.0	µg/L	J	0.54	1.0	6/19/2008 7:13:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	6/19/2008 7:13:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	6/19/2008 7:13:00 PM
Naphthalene	ND	µg/L		0.42	1.0	6/19/2008 7:13:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	6/19/2008 7:13:00 PM
Styrene	ND	µg/L		0.24	1.0	6/19/2008 7:13:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	6/19/2008 7:13:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	6/19/2008 7:13:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	6/19/2008 7:13:00 PM
Toluene	0.7	µg/L	J	0.17	1.0	6/19/2008 7:13:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 7:13:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 7:13:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	6/19/2008 7:13:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	6/19/2008 7:13:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	6/19/2008 7:13:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	6/19/2008 7:13:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	6/19/2008 7:13:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 7:13:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 7:13:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	6/19/2008 7:13:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	6/19/2008 7:13:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL (LEACHATE)	**Lab ID:**	0806B82-03L
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
o-Xylene	ND	µg/L		0.19	1.0	6/19/2008 7:13:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	6/19/2008 7:13:00 PM
Surr: 1,2-Dichloroethane-d4	98.8	%REC			80-120	6/19/2008 7:13:00 PM
Surr: 4-Bromofluorobenzene	98.0	%REC			86-115	6/19/2008 7:13:00 PM
Surr: Dibromofluoromethane	119	%REC			80-120	6/19/2008 7:13:00 PM
Surr: Toluene-d8	105	%REC			88-110	6/19/2008 7:13:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	6/19/2008 7:13:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **JL**
Iron Related Bacteria	ND	CFU/mL		NA	100	6/19/2008 3:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **JL**
Sulfate Reducing Bacteria	ND	CFU/mL		NA	100	6/19/2008 3:30:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	6/20/2008 9:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.07	mg/L	J	0.050	0.10	6/18/2008 11:05:00 AM
Nitrogen, Nitrite	0.17	mg/L	J	0.050	0.50	6/18/2008 11:05:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	1.45	mg/L		0.100	1.00	6/24/2008 7:51:00 PM
Fluoride	0.55	mg/L		0.050	0.20	6/24/2008 7:51:00 PM
Sulfate	7.40	mg/L		0.700	5.00	6/24/2008 7:51:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.34	mg/L		0.030	0.10	6/20/2008 11:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 9:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 1:00:00 PM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	57.2	µmhos/cm		NA	NA	6/20/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	21	mg/L		1.0	1	6/20/2008 6:10:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL (LEACHATE)	**Lab ID:**	0806B82-03L
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L		1.0	1	6/20/2008 7:15:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	25.5	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	6.0	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	32.7	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	9.40	SU		NA	NA	6/20/2008 10:22:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-COAL LEACHATE/LAB FILTERED	**Lab ID:**	0806B82-03LB
Project:	LL SLURRY	**Collection Date:**	6/17/2008 9:55:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.054	mg/L	J	0.0200	0.100	7/9/2008 9:57:00 PM
Calcium	2.42	mg/L		0.100	0.500	7/9/2008 9:57:00 PM
Iron	ND	mg/L		0.0200	0.100	7/9/2008 9:57:00 PM
Magnesium	0.705	mg/L		0.400	0.500	7/9/2008 9:57:00 PM
Manganese	ND	mg/L		0.0010	0.050	7/9/2008 9:57:00 PM
Potassium	5.02	mg/L		0.300	1.00	7/9/2008 9:57:00 PM
Silicon	11.1	mg/L		0.0100	0.100	7/13/2008 1:42:00 PM
Sodium	4.88	mg/L		0.100	0.500	7/9/2008 9:57:00 PM
Zinc	0.008	mg/L	J	0.0030	0.050	7/9/2008 9:57:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0019	mg/L		0.00020	0.0010	6/20/2008 2:14:45 PM
Arsenic	0.0041	mg/L	J	0.00100	0.0050	6/20/2008 2:14:45 PM
Barium	0.0055	mg/L		0.00100	0.0050	6/20/2008 2:14:45 PM
Beryllium	ND	mg/L		0.00020	0.0010	6/20/2008 2:14:45 PM
Cadmium	ND	mg/L		0.00020	0.0010	6/20/2008 2:14:45 PM
Chromium	0.0013	mg/L	J	0.00100	0.0050	6/20/2008 2:14:45 PM
Cobalt	ND	mg/L		0.00100	0.0050	6/20/2008 2:14:45 PM
Copper	ND	mg/L		0.00100	0.0050	6/20/2008 2:14:45 PM
Lead	ND	mg/L		0.00020	0.0010	6/20/2008 2:14:45 PM
Molybdenum	0.0090	mg/L		0.00100	0.0050	6/20/2008 2:14:45 PM
Nickel	ND	mg/L		0.00200	0.0100	6/20/2008 2:14:45 PM
Selenium	0.0195	mg/L		0.00100	0.0050	6/20/2008 2:14:45 PM
Silver	0.0005	mg/L	J	0.00020	0.0050	6/20/2008 2:14:45 PM
Strontium	0.0159	mg/L		0.00100	0.0050	6/20/2008 2:14:45 PM
Thallium	ND	mg/L		0.00020	0.0010	6/20/2008 2:14:45 PM
Vanadium	0.0044	mg/L	J	0.00100	0.0100	6/20/2008 2:14:45 PM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	6/25/2008 12:41:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-14	**Lab ID:**	0806B82-04A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:10:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.252	mg/L		0.0200	0.100	6/23/2008 11:30:00 PM
Calcium	57.1	mg/L		0.100	0.500	6/23/2008 11:30:00 PM
Iron	0.554	mg/L		0.0200	0.100	6/23/2008 11:30:00 PM
Magnesium	19.8	mg/L		0.400	0.500	6/23/2008 11:30:00 PM
Manganese	0.082	mg/L		0.0010	0.050	6/23/2008 11:30:00 PM
Potassium	3.35	mg/L		0.300	1.00	6/25/2008 1:07:00 AM
Silicon	5.95	mg/L		0.0100	0.100	6/25/2008 3:31:00 PM
Sodium	10.8	mg/L		0.100	0.500	6/25/2008 1:07:00 AM
Zinc	ND	mg/L		0.0030	0.050	6/23/2008 11:30:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	6/18/2008 1:32:38 PM
Arsenic	ND	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Barium	0.0554	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Beryllium	ND	mg/L		0.00020	0.0010	6/18/2008 1:32:38 PM
Cadmium	ND	mg/L		0.00020	0.0010	6/18/2008 1:32:38 PM
Chromium	ND	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Cobalt	ND	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Copper	ND	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Lead	ND	mg/L		0.00020	0.0010	6/18/2008 1:32:38 PM
Molybdenum	ND	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Nickel	ND	mg/L		0.00200	0.0100	6/18/2008 1:32:38 PM
Selenium	ND	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	6/18/2008 1:32:38 PM
Strontium	1.15	mg/L		0.00100	0.0050	6/18/2008 1:32:38 PM
Thallium	ND	mg/L		0.00020	0.0010	6/18/2008 1:32:38 PM
Vanadium	ND	mg/L		0.00100	0.0100	6/18/2008 1:32:38 PM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	6/25/2008 12:12:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	6/25/2008 11:28:51 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.049	0.11	6/26/2008 1:19:51 PM
TPH (Oil Range)	ND	mg/L		0.051	0.28	6/26/2008 1:19:51 PM
Surr: o-Terphenyl	94.4	%REC			30-130	6/26/2008 1:19:51 PM

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MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-14	**Lab ID:**	0806B82-04A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:10:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		100	100	6/23/2008
Monoethylene Glycol	ND	mg/L		100	100	6/23/2008
Triethylene Glycol	ND	mg/L		100	100	6/23/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Acenaphthylene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Anthracene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Benzidine	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Benzo(a)anthracene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Benzo(a)pyrene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00634	0.0106	6/23/2008 4:10:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00528	0.0106	6/23/2008 4:10:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2-Chloronaphthalene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2-Chlorophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Chrysene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
o-Cresol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
m,p-Cresol	ND	mg/L		0.00528	0.0211	6/23/2008 4:10:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00317	0.0106	6/23/2008 4:10:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Diethyl phthalate	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Dimethyl phthalate	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-14	**Lab ID:**	0806B82-04A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:10:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00528	0.0106	6/23/2008 4:10:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Fluoranthene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Fluorene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Hexachlorobenzene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Hexachlorobutadiene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Hexachloroethane	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Isophorone	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Naphthalene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Nitrobenzene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2-Nitrophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
4-Nitrophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Pentachlorophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Phenanthrene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Phenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Pyrene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00211	0.0106	6/23/2008 4:10:00 PM
Surr: 2-Fluorophenol	54.5	%REC			21-110	6/23/2008 4:10:00 PM
Surr: Phenol-d5	35.0	%REC			10-110	6/23/2008 4:10:00 PM
Surr: 2,4,6-Tribromophenol	97.0	%REC			10-123	6/23/2008 4:10:00 PM
Surr: Nitrobenzene-d5	93.5	%REC			35-114	6/23/2008 4:10:00 PM
Surr: 2-Fluorobiphenyl	92.3	%REC			43-116	6/23/2008 4:10:00 PM
Surr: 4-Terphenyl-d14	82.9	%REC			33-141	6/23/2008 4:10:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	6/23/2008 4:10:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-14	**Lab ID:**	0806B82-04A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:10:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	6/19/2008 5:51:00 AM
Acrolein	ND	µg/L		4.36	10.0	6/19/2008 5:51:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	6/19/2008 5:51:00 AM
Benzene	ND	µg/L		0.13	1.0	6/19/2008 5:51:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	6/19/2008 5:51:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	6/19/2008 5:51:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	6/19/2008 5:51:00 AM
Bromoform	ND	µg/L		0.40	1.0	6/19/2008 5:51:00 AM
Bromomethane	ND	µg/L		0.50	1.0	6/19/2008 5:51:00 AM
2-Butanone	ND	µg/L		4.68	10.0	6/19/2008 5:51:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	6/19/2008 5:51:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	6/19/2008 5:51:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	6/19/2008 5:51:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	6/19/2008 5:51:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	6/19/2008 5:51:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	6/19/2008 5:51:00 AM
Chloroethane	ND	µg/L		0.94	1.0	6/19/2008 5:51:00 AM
Chloroform	ND	µg/L		0.25	1.0	6/19/2008 5:51:00 AM
Chloromethane	ND	µg/L		0.33	1.0	6/19/2008 5:51:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	6/19/2008 5:51:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	6/19/2008 5:51:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	6/19/2008 5:51:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	6/19/2008 5:51:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	6/19/2008 5:51:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	6/19/2008 5:51:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	6/19/2008 5:51:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	6/19/2008 5:51:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	6/19/2008 5:51:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	6/19/2008 5:51:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	6/19/2008 5:51:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	6/19/2008 5:51:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	6/19/2008 5:51:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	6/19/2008 5:51:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	6/19/2008 5:51:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	6/19/2008 5:51:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	6/19/2008 5:51:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	6/19/2008 5:51:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-14	**Lab ID:**	0806B82-04A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:10:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	6/19/2008 5:51:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 5:51:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	6/19/2008 5:51:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	6/19/2008 5:51:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	6/19/2008 5:51:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	6/19/2008 5:51:00 AM
Iodomethane	ND	µg/L		3.44	10.0	6/19/2008 5:51:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	6/19/2008 5:51:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	6/19/2008 5:51:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	6/19/2008 5:51:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	6/19/2008 5:51:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	6/19/2008 5:51:00 AM
Naphthalene	ND	µg/L		0.42	1.0	6/19/2008 5:51:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	6/19/2008 5:51:00 AM
Styrene	ND	µg/L		0.24	1.0	6/19/2008 5:51:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	6/19/2008 5:51:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	6/19/2008 5:51:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	6/19/2008 5:51:00 AM
Toluene	ND	µg/L		0.17	1.0	6/19/2008 5:51:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 5:51:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	6/19/2008 5:51:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	6/19/2008 5:51:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	6/19/2008 5:51:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	6/19/2008 5:51:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	6/19/2008 5:51:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	6/19/2008 5:51:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 5:51:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	6/19/2008 5:51:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	6/19/2008 5:51:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	6/19/2008 5:51:00 AM
o-Xylene	ND	µg/L		0.19	1.0	6/19/2008 5:51:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	6/19/2008 5:51:00 AM
Surr: 1,2-Dichloroethane-d4	102	%REC			80-120	6/19/2008 5:51:00 AM
Surr: 4-Bromofluorobenzene	101	%REC			86-115	6/19/2008 5:51:00 AM
Surr: Dibromofluoromethane	121	%REC	S		80-120	6/19/2008 5:51:00 AM
Surr: Toluene-d8	102	%REC			88-110	6/19/2008 5:51:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	6/19/2008 5:51:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806B82
Client Sample ID:	LL-14	**Lab ID:**	0806B82-04A
Project:	LL SLURRY	**Collection Date:**	6/17/2008 10:10:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	6/19/2008 10:15:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	6/18/2008 4:08:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	6/18/2008 4:08:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	1.57	mg/L		0.100	1.00	6/24/2008 7:51:00 PM
Fluoride	0.28	mg/L		0.050	0.20	6/24/2008 7:51:00 PM
Sulfate	87.5	mg/L		0.700	5.00	6/24/2008 7:51:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.20	mg/L		0.030	0.10	6/18/2008 10:00:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 9:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/27/2008 1:00:00 PM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	502	µmhos/cm		NA	NA	6/18/2008 6:25:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	249	mg/L		1.0	1	6/18/2008 6:40:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	7	mg/L		1.0	1	6/18/2008 7:30:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	20.5	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	167	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	167	mg/L		1.00	1.0	6/20/2008 10:22:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.98	SU		NA	NA	6/20/2008 10:22:00 AM

Key:			
MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *15-Jul-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-14/FIELD FILTERED
Project: LL SLURRY
Site ID:

WorkOrder: 0806B82
Lab ID: 0806B82-04B
Collection Date: 6/17/2008 10:10:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.233	mg/L		0.0200	0.100	6/23/2008 11:35:00 PM
Calcium	57.5	mg/L		0.100	0.500	6/23/2008 11:35:00 PM
Iron	0.539	mg/L		0.0200	0.100	6/23/2008 11:35:00 PM
Magnesium	19.9	mg/L		0.400	0.500	6/23/2008 11:35:00 PM
Manganese	0.082	mg/L		0.0010	0.050	6/23/2008 11:35:00 PM
Potassium	3.70	mg/L		0.300	1.00	6/25/2008 1:13:00 AM
Silicon	5.86	mg/L		0.0100	0.100	6/25/2008 3:36:00 PM
Sodium	11.8	mg/L		0.100	0.500	6/25/2008 1:13:00 AM
Zinc	0.006	mg/L	J	0.0030	0.050	6/23/2008 11:35:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	6/18/2008 1:38:29 PM
Arsenic	ND	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Barium	0.0555	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Beryllium	ND	mg/L		0.00020	0.0010	6/18/2008 1:38:29 PM
Cadmium	ND	mg/L		0.00020	0.0010	6/18/2008 1:38:29 PM
Chromium	ND	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Cobalt	ND	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Copper	ND	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Lead	ND	mg/L		0.00020	0.0010	6/18/2008 1:38:29 PM
Molybdenum	ND	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Nickel	0.0021	mg/L	J	0.00200	0.0100	6/18/2008 1:38:29 PM
Selenium	ND	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	6/18/2008 1:38:29 PM
Strontium	1.16	mg/L		0.00100	0.0050	6/18/2008 1:38:29 PM
Thallium	ND	mg/L		0.00020	0.0010	6/18/2008 1:38:29 PM
Vanadium	ND	mg/L		0.00100	0.0100	6/18/2008 1:38:29 PM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	6/25/2008 12:13:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

April 20, 2009

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: CS STUDY

Order No.: 0709F34

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 11 sample(s) on 9/25/2007 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason A. Clark

Jason Clark
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0709F34**
Date: **4/20/2009**

CLIENT: WV DEP - CHARLESTON
Project: CS STUDY

REI Consultants, Inc. attests to the validity of the laboratory data generated and reported herein. All analyses performed were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. REIC technical managers have verified compliance of reported results with the REIC's Quality Control Program and SOPs except as noted in this case narrative. Any deviation from compliance is identified in this narrative and/or qualified within the Analytical Results utilizing an alphanumeric character which is explained at the bottom of each Analytical Results page.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

Samples were analyzed using the methods stated in the analytical report without modification unless otherwise noted.

Analytical methods contained in this report referencing Standard Methods are taken from the 18th Edition.

All samples analyzed on an "as-received" basis unless otherwise noted in the analytical report.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

Sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted.

Analytical Comments for METHOD 8260_L, LCS: Acrolein and Iodomethane exceed REIC control limits indicating a high bias. Since the analyte result was ND this exceedance does not adversely impact data usablity.

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-SLURRY LIQUIDS
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-01A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:30:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.150	mg/L		0.0200	0.100	10/8/2007 2:20:00 PM
Calcium	62.1	mg/L		0.100	0.500	10/3/2007 2:35:00 AM
Iron	ND	mg/L		0.0200	0.100	10/3/2007 2:35:00 AM
Magnesium	19.8	mg/L		0.400	0.500	10/3/2007 2:35:00 AM
Manganese	0.086	mg/L		0.0010	0.050	10/3/2007 2:35:00 AM
Potassium	13.9	mg/L		0.300	1.00	10/3/2007 2:35:00 AM
Silicon	2.30	mg/L		0.0100	0.100	10/10/2007 7:43:00 PM
Sodium	265	mg/L		0.100	0.500	10/3/2007 2:35:00 AM
Zinc	ND	mg/L		0.0030	0.050	10/3/2007 2:35:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	2.37	mg/L		0.0200	0.100	10/8/2007 12:36:00 PM
Calcium	63.7	mg/L		0.100	0.500	10/3/2007 12:39:00 AM
Iron	0.828	mg/L		0.0200	0.100	10/3/2007 12:39:00 AM
Magnesium	20.6	mg/L		0.400	0.500	10/3/2007 12:39:00 AM
Manganese	0.097	mg/L		0.0010	0.050	10/3/2007 12:39:00 AM
Potassium	14.3	mg/L		0.300	1.00	10/3/2007 12:39:00 AM
Silicon	8.54	mg/L		0.0100	0.100	10/10/2007 5:36:00 PM
Sodium	267	mg/L		0.100	0.500	10/3/2007 12:39:00 AM
Zinc	0.008	mg/L	J	0.0030	0.050	10/3/2007 12:39:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0057	mg/L		0.00020	0.0010	9/27/2007 5:08:24 PM
Arsenic	0.0042	mg/L	J	0.00100	0.0050	9/27/2007 5:08:24 PM
Barium	0.0974	mg/L		0.00100	0.0050	9/27/2007 5:08:24 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 5:08:24 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 5:08:24 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 5:08:24 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 5:08:24 PM
Copper	0.0016	mg/L	J	0.00100	0.0050	9/27/2007 5:08:24 PM
Lead	ND	mg/L		0.00020	0.0010	9/27/2007 5:08:24 PM
Molybdenum	0.0447	mg/L		0.00100	0.0050	9/27/2007 5:08:24 PM
Nickel	0.0067	mg/L	J	0.00200	0.0100	9/27/2007 5:08:24 PM
Selenium	0.0268	mg/L		0.00100	0.0050	9/27/2007 5:08:24 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 5:08:24 PM
Strontium	1.44	mg/L		0.00100	0.0050	9/27/2007 5:08:24 PM
Thallium	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 5:08:24 PM
Vanadium	0.0013	mg/L	J	0.00100	0.0100	9/27/2007 5:08:24 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01A
Client Sample ID:	LL-SLURRY LIQUIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS				**E200.8**		Analyst: **DBB**

NOTES:
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

TOTAL RECOVERABLE METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
Antimony	0.0059	mg/L		0.00020	0.0010	9/27/2007 3:40:46 PM
Arsenic	0.0047	mg/L	J	0.00100	0.0050	9/27/2007 3:40:46 PM
Barium	0.133	mg/L		0.00100	0.0050	9/27/2007 3:40:46 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 3:40:46 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 3:40:46 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 3:40:46 PM
Cobalt	0.0016	mg/L	J	0.00100	0.0050	9/27/2007 3:40:46 PM
Copper	0.0034	mg/L	J	0.00100	0.0050	9/27/2007 3:40:46 PM
Lead	0.0016	mg/L		0.00020	0.0010	9/27/2007 3:40:46 PM
Molybdenum	0.0466	mg/L		0.00100	0.0050	9/27/2007 3:40:46 PM
Nickel	0.0073	mg/L	J	0.00200	0.0100	9/27/2007 3:40:46 PM
Selenium	0.0278	mg/L		0.00100	0.0050	9/27/2007 3:40:46 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 3:40:46 PM
Strontium	1.47	mg/L		0.00100	0.0050	9/27/2007 3:40:46 PM
Thallium	0.0004	mg/L	J	0.00020	0.0010	9/27/2007 3:40:46 PM
Vanadium	0.0025	mg/L	J	0.00100	0.0100	9/27/2007 3:40:46 PM

NOTES:
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, DISSOLVED				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:00:00 AM

MERCURY, TOTAL				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 9:59:00 AM

SEMIVOLATILE ORGANIC COMPOUNDS				**SW8032A**		Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 2:07:34 PM

SEMI-VOLATILE RANGE ORGANICS				**SW8015B**		Analyst: **TM**
TPH (Diesel Range)	16.6	mg/L		0.165	0.38	10/2/2007 7:55:45 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01A
Client Sample ID:	LL-SLURRY LIQUIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	19.4	mg/L		0.173	0.94	10/2/2007 7:55:45 PM
Surr: o-Terphenyl	95.7	%REC			30-130	10/2/2007 7:55:45 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 5:37:06 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00188	0.0282	10/3/2007 2:24:00 AM
Acenaphthylene	ND	mg/L		0.00268	0.0282	10/3/2007 2:24:00 AM
Anthracene	ND	mg/L		0.00349	0.0282	10/3/2007 2:24:00 AM
Benzidine	ND	mg/L		0.00200	0.0282	10/3/2007 2:24:00 AM
Benzo(a)anthracene	ND	mg/L		0.00259	0.0282	10/3/2007 2:24:00 AM
Benzo(a)pyrene	ND	mg/L		0.00335	0.0282	10/3/2007 2:24:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00411	0.0282	10/3/2007 2:24:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00531	0.0282	10/3/2007 2:24:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00357	0.0282	10/3/2007 2:24:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00194	0.0282	10/3/2007 2:24:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00252	0.0282	10/3/2007 2:24:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00256	0.0282	10/3/2007 2:24:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.0169	0.0282	10/3/2007 2:24:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00322	0.0282	10/3/2007 2:24:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00888	0.0282	10/3/2007 2:24:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00422	0.0282	10/3/2007 2:24:00 AM
2-Chloronaphthalene	ND	mg/L		0.00274	0.0282	10/3/2007 2:24:00 AM
2-Chlorophenol	ND	mg/L		0.00330	0.0282	10/3/2007 2:24:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00201	0.0282	10/3/2007 2:24:00 AM
Chrysene	ND	mg/L		0.00204	0.0282	10/3/2007 2:24:00 AM
o-Cresol	ND	mg/L		0.00269	0.0282	10/3/2007 2:24:00 AM
m,p-Cresol	ND	mg/L		0.00497	0.0563	10/3/2007 2:24:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00375	0.0282	10/3/2007 2:24:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00845	0.0282	10/3/2007 2:24:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00213	0.0282	10/3/2007 2:24:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00226	0.0282	10/3/2007 2:24:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00236	0.0282	10/3/2007 2:24:00 AM
3,3'-Dichlorobenzidine	ND	mg/L		0.00541	0.0282	10/3/2007 2:24:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00350	0.0282	10/3/2007 2:24:00 AM
Diethyl phthalate	ND	mg/L		0.00655	0.0282	10/3/2007 2:24:00 AM
Dimethyl phthalate	ND	mg/L		0.00716	0.0282	10/3/2007 2:24:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-SLURRY LIQUIDS
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-01A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:30:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00404	0.0282	10/3/2007 2:24:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00629	0.0282	10/3/2007 2:24:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00538	0.0282	10/3/2007 2:24:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00518	0.0282	10/3/2007 2:24:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00527	0.0282	10/3/2007 2:24:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00543	0.0282	10/3/2007 2:24:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00244	0.0282	10/3/2007 2:24:00 AM
Fluoranthene	ND	mg/L		0.00441	0.0282	10/3/2007 2:24:00 AM
Fluorene	ND	mg/L		0.00215	0.0282	10/3/2007 2:24:00 AM
Hexachlorobenzene	ND	mg/L		0.00255	0.0282	10/3/2007 2:24:00 AM
Hexachlorobutadiene	ND	mg/L		0.00324	0.0282	10/3/2007 2:24:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00553	0.0282	10/3/2007 2:24:00 AM
Hexachloroethane	ND	mg/L		0.00266	0.0282	10/3/2007 2:24:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00550	0.0282	10/3/2007 2:24:00 AM
Isophorone	ND	mg/L		0.00230	0.0282	10/3/2007 2:24:00 AM
Naphthalene	0.0143	mg/L	J	0.00176	0.0282	10/3/2007 2:24:00 AM
Nitrobenzene	ND	mg/L		0.00313	0.0282	10/3/2007 2:24:00 AM
2-Nitrophenol	ND	mg/L		0.00641	0.0282	10/3/2007 2:24:00 AM
4-Nitrophenol	ND	mg/L		0.00419	0.0282	10/3/2007 2:24:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00372	0.0282	10/3/2007 2:24:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00287	0.0282	10/3/2007 2:24:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00282	0.0282	10/3/2007 2:24:00 AM
Pentachlorophenol	ND	mg/L		0.00551	0.0282	10/3/2007 2:24:00 AM
Phenanthrene	0.0061	mg/L	J	0.00244	0.0282	10/3/2007 2:24:00 AM
Phenol	ND	mg/L		0.00268	0.0282	10/3/2007 2:24:00 AM
Pyrene	ND	mg/L		0.00334	0.0282	10/3/2007 2:24:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00274	0.0282	10/3/2007 2:24:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00553	0.0282	10/3/2007 2:24:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00517	0.0282	10/3/2007 2:24:00 AM
Surr: 2-Fluorophenol	78.9	%REC			21-110	10/3/2007 2:24:00 AM
Surr: Phenol-d5	64.2	%REC			10-110	10/3/2007 2:24:00 AM
Surr: 2,4,6-Tribromophenol	97.0	%REC			10-123	10/3/2007 2:24:00 AM
Surr: Nitrobenzene-d5	96.0	%REC			35-114	10/3/2007 2:24:00 AM
Surr: 2-Fluorobiphenyl	84.3	%REC			43-116	10/3/2007 2:24:00 AM
Surr: 4-Terphenyl-d14	113	%REC			33-141	10/3/2007 2:24:00 AM
TIC: 4-hydroxy-4-methyl-2-pentanone	0.0363	mg/L		NA	NA	10/3/2007 2:24:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01A
Client Sample ID:	LL-SLURRY LIQUIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**

NOTES:
The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	7.0	µg/L	J	4.88	20.0	9/29/2007 12:05:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 12:05:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 12:05:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 12:05:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 12:05:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 12:05:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 12:05:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 12:05:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 12:05:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 12:05:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 12:05:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 12:05:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 12:05:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 12:05:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 12:05:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 12:05:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 12:05:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 12:05:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 12:05:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 12:05:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 12:05:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 12:05:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 12:05:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 12:05:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 12:05:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 12:05:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 12:05:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 12:05:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 12:05:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 12:05:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 12:05:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 12:05:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 12:05:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01A
Client Sample ID:	LL-SLURRY LIQUIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 12:05:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 12:05:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 12:05:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 12:05:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 12:05:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 12:05:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 12:05:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 12:05:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 12:05:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 12:05:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 12:05:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 12:05:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 12:05:00 AM
Methylene chloride	1.4	µg/L		0.54	1.0	9/29/2007 12:05:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 12:05:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 12:05:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 12:05:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 12:05:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 12:05:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 12:05:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 12:05:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 12:05:00 AM
Toluene	0.6	µg/L	J	0.17	1.0	9/29/2007 12:05:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 12:05:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 12:05:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 12:05:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 12:05:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 12:05:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 12:05:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 12:05:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 12:05:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 12:05:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 12:05:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 12:05:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 12:05:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 12:05:00 AM
Surr: 1,2-Dichloroethane-d4	92.1	%REC			80-120	9/29/2007 12:05:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01A
Client Sample ID:	LL-SLURRY LIQUIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	92.1	%REC			86-115	9/29/2007 12:05:00 AM
Surr: Dibromofluoromethane	102	%REC			80-120	9/29/2007 12:05:00 AM
Surr: Toluene-d8	98.4	%REC			88-110	9/29/2007 12:05:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 12:05:00 AM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	1.85	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	0.35	mg/L	J	0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	84.8	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	ND	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	849	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	1.27	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,840	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	933	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	191	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	6.9	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	102	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	103	mg/L		1.00	1.0	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
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REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01A
Client Sample ID:	LL-SLURRY LIQUIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.88	SU		0	NA	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01B
Client Sample ID:	LL-SLURRY SOLIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010C**			Analyst: **JD**
Aluminum	36.1	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
Antimony	ND	mg/Kg		0.500	5.00	9/27/2007 4:43:00 PM
Arsenic	ND	mg/Kg		0.500	5.00	9/27/2007 4:43:00 PM
Barium	0.638	mg/Kg	J	0.200	2.50	9/27/2007 4:43:00 PM
Beryllium	ND	mg/Kg		0.0250	0.250	9/27/2007 4:43:00 PM
Cadmium	ND	mg/Kg		0.0500	0.500	9/27/2007 4:43:00 PM
Calcium	84.1	mg/Kg		2.50	25.0	9/27/2007 4:43:00 PM
Chromium	ND	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
Cobalt	ND	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
Copper	ND	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
Iron	29.7	mg/Kg		0.250	2.50	9/27/2007 4:43:00 PM
Lead	ND	mg/Kg		0.500	5.00	9/27/2007 4:43:00 PM
Magnesium	26.2	mg/Kg		2.50	12.0	9/27/2007 4:43:00 PM
Manganese	0.498	mg/Kg	J	0.100	2.50	9/27/2007 4:43:00 PM
Molybdenum	ND	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
Nickel	ND	mg/Kg		0.250	2.50	9/27/2007 4:43:00 PM
Potassium	43.3	mg/Kg		10.0	25.0	9/27/2007 6:17:00 PM
Selenium	ND	mg/Kg		0.500	5.00	9/27/2007 4:43:00 PM
Silicon	32.3	mg/Kg		0.250	2.50	10/3/2007 2:54:00 PM
Silver	ND	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
Sodium	217	mg/Kg		2.50	25.0	9/27/2007 4:43:00 PM
Strontium	1.57	mg/Kg	J	0.200	2.50	10/1/2007 3:01:00 PM
Thallium	ND	mg/Kg		0.500	5.00	9/27/2007 4:43:00 PM
Vanadium	ND	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
Zinc	2.70	mg/Kg		0.200	2.50	9/27/2007 4:43:00 PM
MERCURY, TOTAL			**SW7471B**			Analyst: **AB**
Mercury	ND	mg/Kg		0.0200	0.100	9/27/2007 11:06:00 AM
PERCENT MOISTURE			**SM2540 B**			Analyst: **JAR**
Percent Moisture	50	wt%		0.01	0.5	10/3/2007
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	282	mg/Kg		2.34	3.89	10/4/2007 8:20:30 PM
TPH (Oil Range)	469	mg/Kg		1.01	9.73	10/4/2007 8:20:30 PM
Surr: o-Terphenyl	106	%REC			30-130	10/4/2007 8:20:30 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Ethylene Glycol	ND	mg/Kg		446	446	10/2/2007 2:12:41 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01B
Client Sample ID:	LL-SLURRY SOLIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	0.070	mg/Kg	J	0.0191	0.333	9/27/2007 5:16:00 PM
Acenaphthylene	ND	mg/Kg		0.0260	0.333	9/27/2007 5:16:00 PM
Anthracene	ND	mg/Kg		0.0222	0.333	9/27/2007 5:16:00 PM
Benzidine	ND	mg/Kg		0.0036	0.333	9/27/2007 5:16:00 PM
Benzo(a)anthracene	0.136	mg/Kg	J	0.0240	0.333	9/27/2007 5:16:00 PM
Benzo(a)pyrene	0.162	mg/Kg	J	0.0308	0.333	9/27/2007 5:16:00 PM
Benzo(b)fluoranthene	0.176	mg/Kg	J	0.0315	0.333	9/27/2007 5:16:00 PM
Benzo(g,h,i)perylene	0.513	mg/Kg		0.0294	0.333	9/27/2007 5:16:00 PM
Benzo(k)fluoranthene	0.065	mg/Kg	J	0.0395	0.333	9/27/2007 5:16:00 PM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.0253	0.333	9/27/2007 5:16:00 PM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.0303	0.333	9/27/2007 5:16:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.0312	0.333	9/27/2007 5:16:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/Kg		0.200	0.333	9/27/2007 5:16:00 PM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.0272	0.333	9/27/2007 5:16:00 PM
Butyl benzyl phthalate	ND	mg/Kg		0.0403	0.333	9/27/2007 5:16:00 PM
4-Chloro-3-methylphenol	ND	mg/Kg		0.0252	0.333	9/27/2007 5:16:00 PM
2-Chloronaphthalene	ND	mg/Kg		0.0243	0.333	9/27/2007 5:16:00 PM
2-Chlorophenol	ND	mg/Kg		0.0267	0.333	9/27/2007 5:16:00 PM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.0228	0.333	9/27/2007 5:16:00 PM
Chrysene	0.198	mg/Kg	J	0.0190	0.333	9/27/2007 5:16:00 PM
o-Cresol	0.207	mg/Kg	J	0.0259	0.333	9/27/2007 5:16:00 PM
m,p-Cresol	0.210	mg/Kg	J	0.0583	0.666	9/27/2007 5:16:00 PM
Dibenzo(a,h)anthracene	0.042	mg/Kg	J	0.0290	0.333	9/27/2007 5:16:00 PM
Di-n-butyl phthalate	ND	mg/Kg		0.100	0.333	9/27/2007 5:16:00 PM
1,2-Dichlorobenzene	ND	mg/Kg		0.0289	0.333	9/27/2007 5:16:00 PM
1,3-Dichlorobenzene	ND	mg/Kg		0.0381	0.333	9/27/2007 5:16:00 PM
1,4-Dichlorobenzene	ND	mg/Kg		0.0335	0.333	9/27/2007 5:16:00 PM
3,3'-Dichlorobenzidine	ND	mg/Kg		0.0239	0.333	9/27/2007 5:16:00 PM
2,4-Dichlorophenol	ND	mg/Kg		0.0223	0.333	9/27/2007 5:16:00 PM
Diethyl phthalate	ND	mg/Kg		0.0214	0.333	9/27/2007 5:16:00 PM
Dimethyl phthalate	ND	mg/Kg		0.0250	0.333	9/27/2007 5:16:00 PM
2,4-Dimethylphenol	0.482	mg/Kg		0.0301	0.333	9/27/2007 5:16:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.0226	0.333	9/27/2007 5:16:00 PM
2,4-Dinitrophenol	ND	mg/Kg		0.0391	0.333	9/27/2007 5:16:00 PM
2,4-Dinitrotoluene	ND	mg/Kg		0.0220	0.333	9/27/2007 5:16:00 PM
2,6-Dinitrotoluene	ND	mg/Kg		0.0302	0.333	9/27/2007 5:16:00 PM
Di-n-octyl phthalate	ND	mg/Kg		0.0466	0.333	9/27/2007 5:16:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-01B
Client Sample ID:	LL-SLURRY SOLIDS	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:30:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/Kg		0.0226	0.333	9/27/2007 5:16:00 PM
Fluoranthene	0.119	mg/Kg	J	0.0278	0.333	9/27/2007 5:16:00 PM
Fluorene	0.184	mg/Kg	J	0.0208	0.333	9/27/2007 5:16:00 PM
Hexachlorobenzene	ND	mg/Kg		0.0223	0.333	9/27/2007 5:16:00 PM
Hexachlorobutadiene	ND	mg/Kg		0.0340	0.333	9/27/2007 5:16:00 PM
Hexachlorocyclopentadiene	ND	mg/Kg		0.0249	0.333	9/27/2007 5:16:00 PM
Hexachloroethane	ND	mg/Kg		0.0353	0.333	9/27/2007 5:16:00 PM
Indeno(1,2,3-cd)pyrene	0.074	mg/Kg	J	0.0317	0.333	9/27/2007 5:16:00 PM
Isophorone	ND	mg/Kg		0.0236	0.333	9/27/2007 5:16:00 PM
Naphthalene	2.69	mg/Kg		0.0258	0.333	9/27/2007 5:16:00 PM
Nitrobenzene	ND	mg/Kg		0.0342	0.333	9/27/2007 5:16:00 PM
2-Nitrophenol	ND	mg/Kg		0.0309	0.333	9/27/2007 5:16:00 PM
4-Nitrophenol	ND	mg/Kg		0.0253	0.333	9/27/2007 5:16:00 PM
N-Nitrosodimethylamine	ND	mg/Kg		0.0318	0.333	9/27/2007 5:16:00 PM
N-Nitrosodiphenylamine	0.171	mg/Kg	J	0.0230	0.333	9/27/2007 5:16:00 PM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.0301	0.333	9/27/2007 5:16:00 PM
Pentachlorophenol	ND	mg/Kg		0.0292	0.333	9/27/2007 5:16:00 PM
Phenanthrene	0.947	mg/Kg		0.0194	0.333	9/27/2007 5:16:00 PM
Phenol	0.068	mg/Kg	J	0.0214	0.333	9/27/2007 5:16:00 PM
Pyrene	0.225	mg/Kg	J	0.0246	0.333	9/27/2007 5:16:00 PM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.0264	0.333	9/27/2007 5:16:00 PM
2,4,5-Trichlorophenol	ND	mg/Kg		0.0289	0.333	9/27/2007 5:16:00 PM
2,4,6-Trichlorophenol	ND	mg/Kg		0.0238	0.333	9/27/2007 5:16:00 PM
Surr: 2-Fluorophenol	70.9	%REC			29.1-120	9/27/2007 5:16:00 PM
Surr: Phenol-d5	73.9	%REC			36.1-163	9/27/2007 5:16:00 PM
Surr: 2,4,6-Tribromophenol	81.3	%REC			35.1-151	9/27/2007 5:16:00 PM
Surr: Nitrobenzene-d5	91.5	%REC			41.1-132	9/27/2007 5:16:00 PM
Surr: 2-Fluorobiphenyl	80.3	%REC			32.9-121	9/27/2007 5:16:00 PM
Surr: 4-Terphenyl-d14	109	%REC			50.9-145	9/27/2007 5:16:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
2-Butanone	ND	µg/Kg		159	400	9/27/2007 10:04:00 AM
2-Hexanone	ND	µg/Kg		79.1	400	9/27/2007 10:04:00 AM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	9/27/2007 10:04:00 AM
Acetone	267	µg/Kg	J	167	800	9/27/2007 10:04:00 AM
Acrolein	ND	µg/Kg		160	400	9/27/2007 10:04:00 AM
Acrylonitrile	ND	µg/Kg		127	400	9/27/2007 10:04:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-SLURRY SOLIDS
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-01B
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:30:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Carbon disulfide	ND	µg/Kg		32.4	200	9/27/2007 10:04:00 AM
Iodomethane	ND	µg/Kg		55.5	400	9/27/2007 10:04:00 AM
Methyl tert-butyl ether	ND	µg/Kg		27.5	200	9/27/2007 10:04:00 AM
Vinyl acetate	ND	µg/Kg		180	400	9/27/2007 10:04:00 AM
Benzene	ND	µg/Kg		10.0	40.0	9/27/2007 10:04:00 AM
Bromobenzene	ND	µg/Kg		24.3	40.0	9/27/2007 10:04:00 AM
Bromochloromethane	ND	µg/Kg		10.2	40.0	9/27/2007 10:04:00 AM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	9/27/2007 10:04:00 AM
Bromoform	ND	µg/Kg		21.0	40.0	9/27/2007 10:04:00 AM
Bromomethane	ND	µg/Kg		15.8	40.0	9/27/2007 10:04:00 AM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	9/27/2007 10:04:00 AM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	9/27/2007 10:04:00 AM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	9/27/2007 10:04:00 AM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	9/27/2007 10:04:00 AM
Chlorobenzene	ND	µg/Kg		13.3	40.0	9/27/2007 10:04:00 AM
Chloroethane	ND	µg/Kg		17.1	40.0	9/27/2007 10:04:00 AM
Chloroform	ND	µg/Kg		5.82	40.0	9/27/2007 10:04:00 AM
Chloromethane	ND	µg/Kg		7.52	40.0	9/27/2007 10:04:00 AM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	9/27/2007 10:04:00 AM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	9/27/2007 10:04:00 AM
Dibromochloromethane	ND	µg/Kg		10.7	40.0	9/27/2007 10:04:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	9/27/2007 10:04:00 AM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	9/27/2007 10:04:00 AM
Dibromomethane	ND	µg/Kg		13.3	40.0	9/27/2007 10:04:00 AM
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	9/27/2007 10:04:00 AM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	9/27/2007 10:04:00 AM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	9/27/2007 10:04:00 AM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	9/27/2007 10:04:00 AM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	9/27/2007 10:04:00 AM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	9/27/2007 10:04:00 AM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	9/27/2007 10:04:00 AM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	9/27/2007 10:04:00 AM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	9/27/2007 10:04:00 AM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	9/27/2007 10:04:00 AM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	9/27/2007 10:04:00 AM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	9/27/2007 10:04:00 AM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	9/27/2007 10:04:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-SLURRY SOLIDS
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-01B
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:30:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	9/27/2007 10:04:00 AM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	9/27/2007 10:04:00 AM
Ethylbenzene	ND	µg/Kg		13.4	40.0	9/27/2007 10:04:00 AM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	9/27/2007 10:04:00 AM
Isopropylbenzene	ND	µg/Kg		22.6	40.0	9/27/2007 10:04:00 AM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	9/27/2007 10:04:00 AM
Methylene chloride	ND	µg/Kg		12.3	40.0	9/27/2007 10:04:00 AM
Naphthalene	ND	µg/Kg		27.7	40.0	9/27/2007 10:04:00 AM
n-Propylbenzene	ND	µg/Kg		13.1	40.0	9/27/2007 10:04:00 AM
Styrene	ND	µg/Kg		10.4	40.0	9/27/2007 10:04:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	9/27/2007 10:04:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	9/27/2007 10:04:00 AM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	9/27/2007 10:04:00 AM
Toluene	27.6	µg/Kg	J	11.0	40.0	9/27/2007 10:04:00 AM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	9/27/2007 10:04:00 AM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	9/27/2007 10:04:00 AM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	9/27/2007 10:04:00 AM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	9/27/2007 10:04:00 AM
Trichloroethene	ND	µg/Kg		9.05	40.0	9/27/2007 10:04:00 AM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	9/27/2007 10:04:00 AM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	9/27/2007 10:04:00 AM
1,2,4-Trimethylbenzene	ND	µg/Kg		17.0	40.0	9/27/2007 10:04:00 AM
1,3,5-Trimethylbenzene	ND	µg/Kg		20.4	40.0	9/27/2007 10:04:00 AM
Vinyl chloride	ND	µg/Kg		10.6	40.0	9/27/2007 10:04:00 AM
o-Xylene	ND	µg/Kg		13.5	40.0	9/27/2007 10:04:00 AM
m,p-Xylene	ND	µg/Kg		28.3	80.0	9/27/2007 10:04:00 AM
Surr: 1,2-Dichloroethane-d4	93.0	%REC			72-120	9/27/2007 10:04:00 AM
Surr: 4-Bromofluorobenzene	123	%REC	S		74-121	9/27/2007 10:04:00 AM
Surr: Dibromofluoromethane	100	%REC			75-120	9/27/2007 10:04:00 AM
Surr: Toluene-d8	106	%REC			81-117	9/27/2007 10:04:00 AM
TIC: Additional Analytes	ND	µg/Kg		NA	NA	9/27/2007 10:04:00 AM

NOTES:
Elevated PQLs are due to matrix interference.

CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	9/27/2007 11:45:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-SLURRY SOLIDS
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-01B
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:30:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ANIONS BY IC, WATER SOLUBLE			**SW9056**			Analyst: **SB**
Chloride	118	mg/Kg		1.00	1.00	10/3/2007 7:35:00 PM
Fluoride	ND	mg/Kg		1.00	1.00	10/3/2007 7:35:00 PM
Nitrogen, Nitrate	ND	mg/Kg		1.00	1.00	10/3/2007 7:35:00 PM
Nitrogen, Nitrite	ND	mg/Kg		1.00	5.00	10/3/2007 7:35:00 PM
Sulfate	690	mg/Kg		1.00	50.0	10/3/2007 7:35:00 PM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **DB**
Nitrogen, Ammonia	33.6	mg/Kg	J	1.00	50.0	10/8/2007 12:00:00 PM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	31.9	wt%		0.010	0.01	9/26/2007 11:15:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/Kg		1.00	10.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	1,710	mg/Kg		1.00	10.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	86.1	mg/Kg		1.00	10.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	1,790	mg/Kg		1.00	10.0	9/27/2007 9:31:00 AM
PH			**SW9045C**			Analyst: **DSA**
pH	8.73	SU		0	NA	9/27/2007 9:31:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-1
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-02A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 12:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.422	mg/L		0.0200	0.100	10/8/2007 2:26:00 PM
Calcium	9.77	mg/L		0.100	0.500	10/3/2007 2:40:00 AM
Iron	0.034	mg/L	J	0.0200	0.100	10/3/2007 2:40:00 AM
Magnesium	2.56	mg/L		0.400	0.500	10/3/2007 2:40:00 AM
Manganese	0.020	mg/L	J	0.0010	0.050	10/3/2007 2:40:00 AM
Potassium	2.60	mg/L		0.300	1.00	10/3/2007 2:40:00 AM
Silicon	5.02	mg/L		0.0100	0.100	10/10/2007 7:48:00 PM
Sodium	129	mg/L		0.100	0.500	10/3/2007 2:40:00 AM
Zinc	0.026	mg/L	J	0.0030	0.050	10/3/2007 2:40:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	3.62	mg/L		0.0200	0.100	10/8/2007 12:42:00 PM
Calcium	9.42	mg/L		0.100	0.500	10/3/2007 12:44:00 AM
Iron	2.13	mg/L		0.0200	0.100	10/3/2007 12:44:00 AM
Magnesium	2.62	mg/L		0.400	0.500	10/3/2007 12:44:00 AM
Manganese	0.019	mg/L	J	0.0010	0.050	10/3/2007 12:44:00 AM
Potassium	3.08	mg/L		0.300	1.00	10/3/2007 12:44:00 AM
Silicon	10.6	mg/L		0.0100	0.100	10/10/2007 5:47:00 PM
Sodium	135	mg/L		0.100	0.500	10/3/2007 12:44:00 AM
Zinc	0.018	mg/L	J	0.0030	0.050	10/3/2007 12:44:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0005	mg/L	J	0.00020	0.0010	9/27/2007 5:14:14 PM
Arsenic	0.0012	mg/L	J	0.00100	0.0050	9/27/2007 5:14:14 PM
Barium	0.0624	mg/L		0.00100	0.0050	9/27/2007 5:14:14 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 5:14:14 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 5:14:14 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 5:14:14 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 5:14:14 PM
Copper	0.0016	mg/L	J	0.00100	0.0050	9/27/2007 5:14:14 PM
Lead	0.0005	mg/L	J	0.00020	0.0010	9/27/2007 5:14:14 PM
Molybdenum	0.0034	mg/L	J	0.00100	0.0050	9/27/2007 5:14:14 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 5:14:14 PM
Selenium	0.0012	mg/L	J	0.00100	0.0050	9/27/2007 5:14:14 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 5:14:14 PM
Strontium	0.183	mg/L		0.00100	0.0050	9/27/2007 5:14:14 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 5:14:14 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 5:14:14 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-02A
Client Sample ID:	LL-1	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 12:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
NOTES:						
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0005	mg/L	J	0.00020	0.0010	9/27/2007 3:46:35 PM
Arsenic	0.0017	mg/L	J	0.00100	0.0050	9/27/2007 3:46:35 PM
Barium	0.0958	mg/L		0.00100	0.0050	9/27/2007 3:46:35 PM
Beryllium	0.0002	mg/L	J	0.00020	0.0010	9/27/2007 3:46:35 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 3:46:35 PM
Chromium	0.0013	mg/L	J	0.00100	0.0050	9/27/2007 3:46:35 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 3:46:35 PM
Copper	0.0036	mg/L	J	0.00100	0.0050	9/27/2007 3:46:35 PM
Lead	0.0184	mg/L		0.00020	0.0010	9/27/2007 3:46:35 PM
Molybdenum	0.0034	mg/L	J	0.00100	0.0050	9/27/2007 3:46:35 PM
Nickel	0.0041	mg/L	J	0.00200	0.0100	9/27/2007 3:46:35 PM
Selenium	0.0015	mg/L	J	0.00100	0.0050	9/27/2007 3:46:35 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 3:46:35 PM
Strontium	0.199	mg/L		0.00100	0.0050	9/27/2007 3:46:35 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 3:46:35 PM
Vanadium	0.0019	mg/L	J	0.00100	0.0100	9/27/2007 3:46:35 PM
NOTES:						
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
The LCS for BE] exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:06:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:02:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 2:20:10 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.046	0.11	10/2/2007 8:29:40 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-1
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-02A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 12:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.049	0.26	10/2/2007 8:29:40 PM
Surr: o-Terphenyl	97.9	%REC			30-130	10/2/2007 8:29:40 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 6:08:39 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00077	0.0116	10/3/2007 1:54:00 AM
Acenaphthylene	ND	mg/L		0.00110	0.0116	10/3/2007 1:54:00 AM
Anthracene	ND	mg/L		0.00144	0.0116	10/3/2007 1:54:00 AM
Benzidine	ND	mg/L		0.00082	0.0116	10/3/2007 1:54:00 AM
Benzo(a)anthracene	ND	mg/L		0.00106	0.0116	10/3/2007 1:54:00 AM
Benzo(a)pyrene	ND	mg/L		0.00138	0.0116	10/3/2007 1:54:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00169	0.0116	10/3/2007 1:54:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00218	0.0116	10/3/2007 1:54:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00147	0.0116	10/3/2007 1:54:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00080	0.0116	10/3/2007 1:54:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00104	0.0116	10/3/2007 1:54:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00105	0.0116	10/3/2007 1:54:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00694	0.0116	10/3/2007 1:54:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00132	0.0116	10/3/2007 1:54:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00365	0.0116	10/3/2007 1:54:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00173	0.0116	10/3/2007 1:54:00 AM
2-Chloronaphthalene	ND	mg/L		0.00113	0.0116	10/3/2007 1:54:00 AM
2-Chlorophenol	ND	mg/L		0.00136	0.0116	10/3/2007 1:54:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00082	0.0116	10/3/2007 1:54:00 AM
Chrysene	ND	mg/L		0.00084	0.0116	10/3/2007 1:54:00 AM
o-Cresol	ND	mg/L		0.00110	0.0116	10/3/2007 1:54:00 AM
m,p-Cresol	ND	mg/L		0.00204	0.0231	10/3/2007 1:54:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00154	0.0116	10/3/2007 1:54:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00347	0.0116	10/3/2007 1:54:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00087	0.0116	10/3/2007 1:54:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00093	0.0116	10/3/2007 1:54:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00097	0.0116	10/3/2007 1:54:00 AM
3,3'-Dichlorobenzidine	ND	mg/L		0.00222	0.0116	10/3/2007 1:54:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00144	0.0116	10/3/2007 1:54:00 AM
Diethyl phthalate	ND	mg/L		0.00269	0.0116	10/3/2007 1:54:00 AM
Dimethyl phthalate	ND	mg/L		0.00294	0.0116	10/3/2007 1:54:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL-1
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-02A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 12:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00166	0.0116	10/3/2007 1:54:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00259	0.0116	10/3/2007 1:54:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00221	0.0116	10/3/2007 1:54:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00213	0.0116	10/3/2007 1:54:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00217	0.0116	10/3/2007 1:54:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00223	0.0116	10/3/2007 1:54:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00100	0.0116	10/3/2007 1:54:00 AM
Fluoranthene	ND	mg/L		0.00181	0.0116	10/3/2007 1:54:00 AM
Fluorene	ND	mg/L		0.00088	0.0116	10/3/2007 1:54:00 AM
Hexachlorobenzene	ND	mg/L		0.00105	0.0116	10/3/2007 1:54:00 AM
Hexachlorobutadiene	ND	mg/L		0.00133	0.0116	10/3/2007 1:54:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00227	0.0116	10/3/2007 1:54:00 AM
Hexachloroethane	ND	mg/L		0.00109	0.0116	10/3/2007 1:54:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00226	0.0116	10/3/2007 1:54:00 AM
Isophorone	ND	mg/L		0.00095	0.0116	10/3/2007 1:54:00 AM
Naphthalene	ND	mg/L		0.00072	0.0116	10/3/2007 1:54:00 AM
Nitrobenzene	ND	mg/L		0.00129	0.0116	10/3/2007 1:54:00 AM
2-Nitrophenol	ND	mg/L		0.00264	0.0116	10/3/2007 1:54:00 AM
4-Nitrophenol	ND	mg/L		0.00172	0.0116	10/3/2007 1:54:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00153	0.0116	10/3/2007 1:54:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00118	0.0116	10/3/2007 1:54:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00116	0.0116	10/3/2007 1:54:00 AM
Pentachlorophenol	ND	mg/L		0.00226	0.0116	10/3/2007 1:54:00 AM
Phenanthrene	ND	mg/L		0.00100	0.0116	10/3/2007 1:54:00 AM
Phenol	ND	mg/L		0.00110	0.0116	10/3/2007 1:54:00 AM
Pyrene	ND	mg/L		0.00137	0.0116	10/3/2007 1:54:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00113	0.0116	10/3/2007 1:54:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00227	0.0116	10/3/2007 1:54:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00213	0.0116	10/3/2007 1:54:00 AM
Surr: 2-Fluorophenol	60.2	%REC			21-110	10/3/2007 1:54:00 AM
Surr: Phenol-d5	40.2	%REC			10-110	10/3/2007 1:54:00 AM
Surr: 2,4,6-Tribromophenol	97.4	%REC			10-123	10/3/2007 1:54:00 AM
Surr: Nitrobenzene-d5	89.6	%REC			35-114	10/3/2007 1:54:00 AM
Surr: 2-Fluorobiphenyl	78.9	%REC			43-116	10/3/2007 1:54:00 AM
Surr: 4-Terphenyl-d14	114	%REC			33-141	10/3/2007 1:54:00 AM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/3/2007 1:54:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-02A
Client Sample ID:	LL-1	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 12:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
NOTES: The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.						
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 12:38:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 12:38:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 12:38:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 12:38:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 12:38:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 12:38:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 12:38:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 12:38:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 12:38:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 12:38:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 12:38:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 12:38:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 12:38:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 12:38:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 12:38:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 12:38:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 12:38:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 12:38:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 12:38:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 12:38:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 12:38:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 12:38:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 12:38:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 12:38:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 12:38:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 12:38:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 12:38:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 12:38:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 12:38:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 12:38:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 12:38:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 12:38:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 12:38:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

CLIENT: WV DEP - CHARLESTON **WorkOrder:** 0709F34 **Lab ID** 0709F34-02A
Client Sample ID: LL-1 **DateReceived:** 9/25/2007
Project: CS STUDY **Collection Date:** 9/25/2007 12:15:00 PM
Site ID: **Matrix:** LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 12:38:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 12:38:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 12:38:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 12:38:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 12:38:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 12:38:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 12:38:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 12:38:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 12:38:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 12:38:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 12:38:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 12:38:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 12:38:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 12:38:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 12:38:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 12:38:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 12:38:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 12:38:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 12:38:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 12:38:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 12:38:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 12:38:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 12:38:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 12:38:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 12:38:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 12:38:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 12:38:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 12:38:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 12:38:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 12:38:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 12:38:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 12:38:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 12:38:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 12:38:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 12:38:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 12:38:00 AM
Surr: 1,2-Dichloroethane-d4	87.8	%REC			80-120	9/29/2007 12:38:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-02A
Client Sample ID:	LL-1	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 12:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	90.5	%REC			86-115	9/29/2007 12:38:00 AM
Surr: Dibromofluoromethane	98.1	%REC			80-120	9/29/2007 12:38:00 AM
Surr: Toluene-d8	101	%REC			88-110	9/29/2007 12:38:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 12:38:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	50,000	CFU/mL		NA	100	9/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.29	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	33.1	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	0.44	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	52.1	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	674	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	434	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	92	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	4.9	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	240	mg/L		1.00	1.0	9/26/2007 11:39:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-02A
Client Sample ID:	LL-1	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 12:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	2.2	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	242	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.99	SU		0	NA	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL4
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-03A
DateReceived: 9/25/2007
Collection Date: 9/24/2007 11:14:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.236	mg/L		0.0200	0.100	10/8/2007 2:55:00 PM
Calcium	37.2	mg/L		0.100	0.500	10/3/2007 2:57:00 AM
Iron	0.084	mg/L	J	0.0200	0.100	10/3/2007 2:57:00 AM
Magnesium	9.28	mg/L		0.400	0.500	10/3/2007 2:57:00 AM
Manganese	0.100	mg/L		0.0010	0.050	10/3/2007 2:57:00 AM
Potassium	2.94	mg/L		0.300	1.00	10/3/2007 2:57:00 AM
Silicon	5.79	mg/L		0.0100	0.100	10/10/2007 8:14:00 PM
Sodium	10.6	mg/L		0.100	0.500	10/3/2007 2:57:00 AM
Zinc	0.013	mg/L	J	0.0030	0.050	10/3/2007 2:57:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.240	mg/L		0.0200	0.100	10/8/2007 12:59:00 PM
Calcium	37.5	mg/L		0.100	0.500	10/3/2007 1:13:00 AM
Iron	0.349	mg/L		0.0200	0.100	10/3/2007 1:13:00 AM
Magnesium	9.94	mg/L		0.400	0.500	10/3/2007 1:13:00 AM
Manganese	0.106	mg/L		0.0010	0.050	10/3/2007 1:13:00 AM
Potassium	3.07	mg/L		0.300	1.00	10/3/2007 1:13:00 AM
Silicon	5.58	mg/L		0.0100	0.100	10/10/2007 6:10:00 PM
Sodium	10.8	mg/L		0.100	0.500	10/3/2007 1:13:00 AM
Zinc	0.004	mg/L	J	0.0030	0.050	10/3/2007 1:13:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 5:20:06 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Barium	0.0564	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 5:20:06 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 5:20:06 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Copper	0.0015	mg/L	J	0.00100	0.0050	9/27/2007 5:20:06 PM
Lead	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 5:20:06 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Nickel	0.0035	mg/L	J	0.00200	0.0100	9/27/2007 5:20:06 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Strontium	0.310	mg/L		0.00100	0.0050	9/27/2007 5:20:06 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 5:20:06 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 5:20:06 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-03A
Client Sample ID:	LL4	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 11:14:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
NOTES:						
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
TOTAL RECOVERABLE METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 3:52:25 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Barium	0.0550	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 3:52:25 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 3:52:25 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Copper	0.0024	mg/L	J	0.00100	0.0050	9/27/2007 3:52:25 PM
Lead	0.0002	mg/L	J	0.00020	0.0010	9/27/2007 3:52:25 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Nickel	0.0039	mg/L	J	0.00200	0.0100	9/27/2007 3:52:25 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Strontium	0.296	mg/L		0.00100	0.0050	9/27/2007 3:52:25 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 3:52:25 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 3:52:25 PM
NOTES:						
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
MERCURY, DISSOLVED				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:11:00 AM
MERCURY, TOTAL				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:10:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS				**SW8032A**		Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 2:33:10 PM
SEMI-VOLATILE RANGE ORGANICS				**SW8015B**		Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.045	0.10	10/2/2007 9:03:38 PM

Key:				
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	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-03A
Client Sample ID:	LL4	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 11:14:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.047	0.25	10/2/2007 9:03:38 PM
Surr: o-Terphenyl	95.3	%REC			30-130	10/2/2007 9:03:38 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 6:40:10 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00071	0.0106	10/3/2007 1:25:00 AM
Acenaphthylene	ND	mg/L		0.00101	0.0106	10/3/2007 1:25:00 AM
Anthracene	ND	mg/L		0.00132	0.0106	10/3/2007 1:25:00 AM
Benzidine	ND	mg/L		0.00075	0.0106	10/3/2007 1:25:00 AM
Benzo(a)anthracene	ND	mg/L		0.00097	0.0106	10/3/2007 1:25:00 AM
Benzo(a)pyrene	ND	mg/L		0.00126	0.0106	10/3/2007 1:25:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00155	0.0106	10/3/2007 1:25:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00200	0.0106	10/3/2007 1:25:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00134	0.0106	10/3/2007 1:25:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00073	0.0106	10/3/2007 1:25:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00095	0.0106	10/3/2007 1:25:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00097	0.0106	10/3/2007 1:25:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00636	0.0106	10/3/2007 1:25:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00121	0.0106	10/3/2007 1:25:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00335	0.0106	10/3/2007 1:25:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00159	0.0106	10/3/2007 1:25:00 AM
2-Chloronaphthalene	ND	mg/L		0.00103	0.0106	10/3/2007 1:25:00 AM
2-Chlorophenol	ND	mg/L		0.00124	0.0106	10/3/2007 1:25:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0106	10/3/2007 1:25:00 AM
Chrysene	ND	mg/L		0.00077	0.0106	10/3/2007 1:25:00 AM
o-Cresol	ND	mg/L		0.00101	0.0106	10/3/2007 1:25:00 AM
m,p-Cresol	ND	mg/L		0.00187	0.0212	10/3/2007 1:25:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00141	0.0106	10/3/2007 1:25:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00318	0.0106	10/3/2007 1:25:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00080	0.0106	10/3/2007 1:25:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00085	0.0106	10/3/2007 1:25:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00089	0.0106	10/3/2007 1:25:00 AM
3,3'-Dichlorobenzidine	ND	mg/L		0.00204	0.0106	10/3/2007 1:25:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00132	0.0106	10/3/2007 1:25:00 AM
Diethyl phthalate	ND	mg/L		0.00247	0.0106	10/3/2007 1:25:00 AM
Dimethyl phthalate	ND	mg/L		0.00270	0.0106	10/3/2007 1:25:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL4
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-03A
DateReceived: 9/25/2007
Collection Date: 9/24/2007 11:14:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00152	0.0106	10/3/2007 1:25:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00237	0.0106	10/3/2007 1:25:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0106	10/3/2007 1:25:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00195	0.0106	10/3/2007 1:25:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00198	0.0106	10/3/2007 1:25:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00204	0.0106	10/3/2007 1:25:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00092	0.0106	10/3/2007 1:25:00 AM
Fluoranthene	ND	mg/L		0.00166	0.0106	10/3/2007 1:25:00 AM
Fluorene	ND	mg/L		0.00081	0.0106	10/3/2007 1:25:00 AM
Hexachlorobenzene	ND	mg/L		0.00096	0.0106	10/3/2007 1:25:00 AM
Hexachlorobutadiene	ND	mg/L		0.00122	0.0106	10/3/2007 1:25:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00208	0.0106	10/3/2007 1:25:00 AM
Hexachloroethane	ND	mg/L		0.00100	0.0106	10/3/2007 1:25:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00207	0.0106	10/3/2007 1:25:00 AM
Isophorone	ND	mg/L		0.00087	0.0106	10/3/2007 1:25:00 AM
Naphthalene	ND	mg/L		0.00066	0.0106	10/3/2007 1:25:00 AM
Nitrobenzene	ND	mg/L		0.00118	0.0106	10/3/2007 1:25:00 AM
2-Nitrophenol	ND	mg/L		0.00242	0.0106	10/3/2007 1:25:00 AM
4-Nitrophenol	ND	mg/L		0.00158	0.0106	10/3/2007 1:25:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00140	0.0106	10/3/2007 1:25:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00108	0.0106	10/3/2007 1:25:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00106	0.0106	10/3/2007 1:25:00 AM
Pentachlorophenol	ND	mg/L		0.00208	0.0106	10/3/2007 1:25:00 AM
Phenanthrene	ND	mg/L		0.00092	0.0106	10/3/2007 1:25:00 AM
Phenol	ND	mg/L		0.00101	0.0106	10/3/2007 1:25:00 AM
Pyrene	ND	mg/L		0.00126	0.0106	10/3/2007 1:25:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00103	0.0106	10/3/2007 1:25:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00208	0.0106	10/3/2007 1:25:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00195	0.0106	10/3/2007 1:25:00 AM
Surr: 2-Fluorophenol	55.9	%REC			21-110	10/3/2007 1:25:00 AM
Surr: Phenol-d5	37.6	%REC			10-110	10/3/2007 1:25:00 AM
Surr: 2,4,6-Tribromophenol	96.4	%REC			10-123	10/3/2007 1:25:00 AM
Surr: Nitrobenzene-d5	89.8	%REC			35-114	10/3/2007 1:25:00 AM
Surr: 2-Fluorobiphenyl	79.0	%REC			43-116	10/3/2007 1:25:00 AM
Surr: 4-Terphenyl-d14	114	%REC			33-141	10/3/2007 1:25:00 AM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/3/2007 1:25:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-03A
Client Sample ID:	LL4	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 11:14:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS				**SW8270C**		Analyst: **CLS**
NOTES: The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.						
VOLATILE ORGANIC COMPOUNDS				**SW8260B**		Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 1:11:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 1:11:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 1:11:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 1:11:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 1:11:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 1:11:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 1:11:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 1:11:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 1:11:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 1:11:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 1:11:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 1:11:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 1:11:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 1:11:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 1:11:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 1:11:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 1:11:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 1:11:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 1:11:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 1:11:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 1:11:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 1:11:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 1:11:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 1:11:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 1:11:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 1:11:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 1:11:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 1:11:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 1:11:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 1:11:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 1:11:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 1:11:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 1:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL4
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-03A
DateReceived: 9/25/2007
Collection Date: 9/24/2007 11:14:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 1:11:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 1:11:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 1:11:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 1:11:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 1:11:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 1:11:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 1:11:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 1:11:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 1:11:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 1:11:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 1:11:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 1:11:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 1:11:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 1:11:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 1:11:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 1:11:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 1:11:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 1:11:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 1:11:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 1:11:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 1:11:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 1:11:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 1:11:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 1:11:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 1:11:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 1:11:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 1:11:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 1:11:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 1:11:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 1:11:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 1:11:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 1:11:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 1:11:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 1:11:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 1:11:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 1:11:00 AM
Surr: 1,2-Dichloroethane-d4	89.9	%REC			80-120	9/29/2007 1:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL4
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-03A
DateReceived: 9/25/2007
Collection Date: 9/24/2007 11:14:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	93.7	%REC			86-115	9/29/2007 1:11:00 AM
Surr: Dibromofluoromethane	98.9	%REC			80-120	9/29/2007 1:11:00 AM
Surr: Toluene-d8	100	%REC			88-110	9/29/2007 1:11:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 1:11:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **DB**
Iron Related Bacteria	25,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	100	CFU/mL		NA	100	9/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.19	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	1.22	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	ND	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	15.8	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	317	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	180	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	9	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	7.2	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	140	mg/L		1.00	1.0	9/26/2007 11:39:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-03A
Client Sample ID:	LL4	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 11:14:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	141	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.75	SU		0	NA	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL5
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-04A
DateReceived: 9/25/2007
Collection Date: 9/24/2007 3:11:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.071	mg/L	J	0.0200	0.100	10/8/2007 3:01:00 PM
Calcium	9.67	mg/L		0.100	0.500	10/3/2007 3:03:00 AM
Iron	0.185	mg/L		0.0200	0.100	10/3/2007 3:03:00 AM
Magnesium	3.69	mg/L		0.400	0.500	10/3/2007 3:03:00 AM
Manganese	0.321	mg/L		0.0010	0.050	10/3/2007 3:03:00 AM
Potassium	2.14	mg/L		0.300	1.00	10/3/2007 3:03:00 AM
Silicon	5.43	mg/L		0.0100	0.100	10/10/2007 8:24:00 PM
Sodium	6.50	mg/L		0.100	0.500	10/3/2007 3:03:00 AM
Zinc	0.032	mg/L	J	0.0030	0.050	10/3/2007 3:03:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.093	mg/L	J	0.0200	0.100	10/8/2007 1:05:00 PM
Calcium	15.7	mg/L		0.100	0.500	10/3/2007 1:19:00 AM
Iron	0.128	mg/L		0.0200	0.100	10/3/2007 1:19:00 AM
Magnesium	4.25	mg/L		0.400	0.500	10/3/2007 1:19:00 AM
Manganese	0.075	mg/L		0.0010	0.050	10/3/2007 1:19:00 AM
Potassium	5.30	mg/L		0.300	1.00	10/3/2007 1:19:00 AM
Silicon	5.20	mg/L		0.0100	0.100	10/10/2007 6:15:00 PM
Sodium	312	mg/L		0.100	0.500	10/3/2007 1:19:00 AM
Zinc	0.042	mg/L	J	0.0030	0.050	10/3/2007 1:19:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 5:25:57 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Barium	0.0688	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 5:25:57 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 5:25:57 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Copper	0.0016	mg/L	J	0.00100	0.0050	9/27/2007 5:25:57 PM
Lead	ND	mg/L		0.00020	0.0010	9/27/2007 5:25:57 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 5:25:57 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Strontium	0.124	mg/L		0.00100	0.0050	9/27/2007 5:25:57 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 5:25:57 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 5:25:57 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-04A
Client Sample ID:	LL5	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 3:11:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
NOTES:						
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
The LCS for BE] exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
TOTAL RECOVERABLE METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 3:58:15 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Barium	0.0737	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 3:58:15 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 3:58:15 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Copper	0.0011	mg/L	J	0.00100	0.0050	9/27/2007 3:58:15 PM
Lead	ND	mg/L		0.00020	0.0010	9/27/2007 3:58:15 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Nickel	0.0024	mg/L	J	0.00200	0.0100	9/27/2007 3:58:15 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Strontium	0.130	mg/L		0.00100	0.0050	9/27/2007 3:58:15 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 3:58:15 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 3:58:15 PM
NOTES:						
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.						
MERCURY, DISSOLVED				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:14:00 AM
MERCURY, TOTAL				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:13:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS				**SW8032A**		Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 2:45:47 PM
SEMI-VOLATILE RANGE ORGANICS				**SW8015B**		Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.045	0.10	10/2/2007 9:37:30 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-04A
Client Sample ID:	LL5	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 3:11:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.047	0.25	10/2/2007 9:37:30 PM
Surr: o-Terphenyl	99.7	%REC			30-130	10/2/2007 9:37:30 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 7:12:22 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00070	0.0105	10/3/2007 12:55:00 AM
Acenaphthylene	ND	mg/L		0.00100	0.0105	10/3/2007 12:55:00 AM
Anthracene	ND	mg/L		0.00130	0.0105	10/3/2007 12:55:00 AM
Benzidine	ND	mg/L		0.00074	0.0105	10/3/2007 12:55:00 AM
Benzo(a)anthracene	ND	mg/L		0.00096	0.0105	10/3/2007 12:55:00 AM
Benzo(a)pyrene	ND	mg/L		0.00124	0.0105	10/3/2007 12:55:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00153	0.0105	10/3/2007 12:55:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00197	0.0105	10/3/2007 12:55:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00133	0.0105	10/3/2007 12:55:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00072	0.0105	10/3/2007 12:55:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00094	0.0105	10/3/2007 12:55:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00095	0.0105	10/3/2007 12:55:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00627	0.0105	10/3/2007 12:55:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00120	0.0105	10/3/2007 12:55:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00330	0.0105	10/3/2007 12:55:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00157	0.0105	10/3/2007 12:55:00 AM
2-Chloronaphthalene	ND	mg/L		0.00102	0.0105	10/3/2007 12:55:00 AM
2-Chlorophenol	ND	mg/L		0.00123	0.0105	10/3/2007 12:55:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00074	0.0105	10/3/2007 12:55:00 AM
Chrysene	ND	mg/L		0.00076	0.0105	10/3/2007 12:55:00 AM
o-Cresol	ND	mg/L		0.00100	0.0105	10/3/2007 12:55:00 AM
m,p-Cresol	ND	mg/L		0.00185	0.0209	10/3/2007 12:55:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00139	0.0105	10/3/2007 12:55:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00314	0.0105	10/3/2007 12:55:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00079	0.0105	10/3/2007 12:55:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00084	0.0105	10/3/2007 12:55:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00088	0.0105	10/3/2007 12:55:00 AM
3,3'-Dichlorobenzidine	ND	mg/L		0.00201	0.0105	10/3/2007 12:55:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00130	0.0105	10/3/2007 12:55:00 AM
Diethyl phthalate	ND	mg/L		0.00243	0.0105	10/3/2007 12:55:00 AM
Dimethyl phthalate	ND	mg/L		0.00266	0.0105	10/3/2007 12:55:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL5
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-04A
DateReceived: 9/25/2007
Collection Date: 9/24/2007 3:11:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00150	0.0105	10/3/2007 12:55:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00234	0.0105	10/3/2007 12:55:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00200	0.0105	10/3/2007 12:55:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00192	0.0105	10/3/2007 12:55:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00196	0.0105	10/3/2007 12:55:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00202	0.0105	10/3/2007 12:55:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00091	0.0105	10/3/2007 12:55:00 AM
Fluoranthene	ND	mg/L		0.00164	0.0105	10/3/2007 12:55:00 AM
Fluorene	ND	mg/L		0.00080	0.0105	10/3/2007 12:55:00 AM
Hexachlorobenzene	ND	mg/L		0.00095	0.0105	10/3/2007 12:55:00 AM
Hexachlorobutadiene	ND	mg/L		0.00120	0.0105	10/3/2007 12:55:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00205	0.0105	10/3/2007 12:55:00 AM
Hexachloroethane	ND	mg/L		0.00099	0.0105	10/3/2007 12:55:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00204	0.0105	10/3/2007 12:55:00 AM
Isophorone	ND	mg/L		0.00086	0.0105	10/3/2007 12:55:00 AM
Naphthalene	ND	mg/L		0.00065	0.0105	10/3/2007 12:55:00 AM
Nitrobenzene	ND	mg/L		0.00116	0.0105	10/3/2007 12:55:00 AM
2-Nitrophenol	ND	mg/L		0.00238	0.0105	10/3/2007 12:55:00 AM
4-Nitrophenol	ND	mg/L		0.00156	0.0105	10/3/2007 12:55:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00138	0.0105	10/3/2007 12:55:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00107	0.0105	10/3/2007 12:55:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00105	0.0105	10/3/2007 12:55:00 AM
Pentachlorophenol	ND	mg/L		0.00205	0.0105	10/3/2007 12:55:00 AM
Phenanthrene	ND	mg/L		0.00091	0.0105	10/3/2007 12:55:00 AM
Phenol	ND	mg/L		0.00100	0.0105	10/3/2007 12:55:00 AM
Pyrene	ND	mg/L		0.00124	0.0105	10/3/2007 12:55:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00102	0.0105	10/3/2007 12:55:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00205	0.0105	10/3/2007 12:55:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00192	0.0105	10/3/2007 12:55:00 AM
Surr: 2-Fluorophenol	56.3	%REC			21-110	10/3/2007 12:55:00 AM
Surr: Phenol-d5	37.8	%REC			10-110	10/3/2007 12:55:00 AM
Surr: 2,4,6-Tribromophenol	96.1	%REC			10-123	10/3/2007 12:55:00 AM
Surr: Nitrobenzene-d5	88.5	%REC			35-114	10/3/2007 12:55:00 AM
Surr: 2-Fluorobiphenyl	80.5	%REC			43-116	10/3/2007 12:55:00 AM
Surr: 4-Terphenyl-d14	112	%REC			33-141	10/3/2007 12:55:00 AM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/3/2007 12:55:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-04A
Client Sample ID:	LL5	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 3:11:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**

NOTES:
The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 1:44:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 1:44:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 1:44:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 1:44:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 1:44:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 1:44:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 1:44:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 1:44:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 1:44:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 1:44:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 1:44:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 1:44:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 1:44:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 1:44:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 1:44:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 1:44:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 1:44:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 1:44:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 1:44:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 1:44:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 1:44:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 1:44:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 1:44:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 1:44:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 1:44:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 1:44:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 1:44:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 1:44:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 1:44:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 1:44:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 1:44:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 1:44:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 1:44:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-04A
Client Sample ID:	LL5	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 3:11:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 1:44:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 1:44:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 1:44:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 1:44:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 1:44:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 1:44:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 1:44:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 1:44:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 1:44:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 1:44:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 1:44:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 1:44:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 1:44:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 1:44:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 1:44:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 1:44:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 1:44:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 1:44:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 1:44:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 1:44:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 1:44:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 1:44:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 1:44:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 1:44:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 1:44:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 1:44:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 1:44:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 1:44:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 1:44:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 1:44:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 1:44:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 1:44:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 1:44:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 1:44:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 1:44:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 1:44:00 AM
Surr: 1,2-Dichloroethane-d4	90.7	%REC			80-120	9/29/2007 1:44:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-04A
Client Sample ID:	LL5	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 3:11:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	94.5	%REC			86-115	9/29/2007 1:44:00 AM
Surr: Dibromofluoromethane	99.8	%REC			80-120	9/29/2007 1:44:00 AM
Surr: Toluene-d8	98.1	%REC			88-110	9/29/2007 1:44:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 1:44:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	9/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.18	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	2.24	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	ND	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	18.2	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.07	mg/L	J	0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	123	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	65	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	5	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	20.7	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	32.5	mg/L		1.00	1.0	9/26/2007 11:39:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-04A
Client Sample ID:	LL5	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 3:11:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	32.5	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.53	SU		0	NA	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL7
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-05A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:35:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.126	mg/L		0.0200	0.100	10/8/2007 3:07:00 PM
Calcium	15.3	mg/L		0.100	0.500	10/3/2007 3:09:00 AM
Iron	0.095	mg/L	J	0.0200	0.100	10/3/2007 3:09:00 AM
Magnesium	4.14	mg/L		0.400	0.500	10/3/2007 3:09:00 AM
Manganese	0.072	mg/L		0.0010	0.050	10/3/2007 3:09:00 AM
Potassium	5.18	mg/L		0.300	1.00	10/3/2007 3:09:00 AM
Silicon	5.04	mg/L		0.0100	0.100	10/10/2007 8:30:00 PM
Sodium	301	mg/L		0.100	0.500	10/3/2007 3:09:00 AM
Zinc	0.042	mg/L	J	0.0030	0.050	10/3/2007 3:09:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.125	mg/L		0.0200	0.100	10/8/2007 1:11:00 PM
Calcium	14.7	mg/L		0.100	0.500	10/3/2007 1:25:00 AM
Iron	0.135	mg/L		0.0200	0.100	10/3/2007 1:25:00 AM
Magnesium	3.92	mg/L		0.400	0.500	10/3/2007 1:25:00 AM
Manganese	0.070	mg/L		0.0010	0.050	10/3/2007 1:25:00 AM
Potassium	4.98	mg/L		0.300	1.00	10/3/2007 1:25:00 AM
Silicon	4.99	mg/L		0.0100	0.100	10/10/2007 6:20:00 PM
Sodium	293	mg/L		0.100	0.500	10/3/2007 1:25:00 AM
Zinc	0.036	mg/L	J	0.0030	0.050	10/3/2007 1:25:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 6:01:05 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 6:01:05 PM
Barium	0.244	mg/L		0.00100	0.0050	9/27/2007 6:01:05 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 6:01:05 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 6:01:05 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 6:01:05 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 6:01:05 PM
Copper	0.0011	mg/L	J	0.00100	0.0050	9/27/2007 6:01:05 PM
Lead	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 6:01:05 PM
Molybdenum	0.0012	mg/L	J	0.00100	0.0050	9/27/2007 6:01:05 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 6:01:05 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 6:01:05 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 6:01:05 PM
Strontium	0.465	mg/L		0.00100	0.0050	9/27/2007 6:01:05 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 6:01:05 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 6:01:05 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-05A
Client Sample ID:	LL7	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:35:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS				**E200.8**		Analyst: **DBB**

NOTES:

The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

TOTAL RECOVERABLE METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 4:21:39 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 4:21:39 PM
Barium	0.261	mg/L		0.00100	0.0050	9/27/2007 4:21:39 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 4:21:39 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 4:21:39 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 4:21:39 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 4:21:39 PM
Copper	0.0013	mg/L	J	0.00100	0.0050	9/27/2007 4:21:39 PM
Lead	0.0007	mg/L	J	0.00020	0.0010	9/27/2007 4:21:39 PM
Molybdenum	0.0013	mg/L	J	0.00100	0.0050	9/27/2007 4:21:39 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 4:21:39 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 4:21:39 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 4:21:39 PM
Strontium	0.487	mg/L		0.00100	0.0050	9/27/2007 4:21:39 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 4:21:39 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 4:21:39 PM

NOTES:

The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, DISSOLVED				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:16:00 AM

MERCURY, TOTAL				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:15:00 AM

SEMIVOLATILE ORGANIC COMPOUNDS				**SW8032A**		Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 2:58:21 PM

SEMI-VOLATILE RANGE ORGANICS				**SW8015B**		Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.045	0.10	10/2/2007 10:11:26 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-05A
Client Sample ID:	LL7	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:35:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.047	0.25	10/2/2007 10:11:26 PM
Surr: o-Terphenyl	97.0	%REC			30-130	10/2/2007 10:11:26 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 7:43:54 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00068	0.0102	10/3/2007 12:26:00 AM
Acenaphthylene	ND	mg/L		0.00097	0.0102	10/3/2007 12:26:00 AM
Anthracene	ND	mg/L		0.00127	0.0102	10/3/2007 12:26:00 AM
Benzidine	ND	mg/L		0.00073	0.0102	10/3/2007 12:26:00 AM
Benzo(a)anthracene	ND	mg/L		0.00094	0.0102	10/3/2007 12:26:00 AM
Benzo(a)pyrene	ND	mg/L		0.00122	0.0102	10/3/2007 12:26:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00149	0.0102	10/3/2007 12:26:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00193	0.0102	10/3/2007 12:26:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00130	0.0102	10/3/2007 12:26:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00070	0.0102	10/3/2007 12:26:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00092	0.0102	10/3/2007 12:26:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00093	0.0102	10/3/2007 12:26:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00614	0.0102	10/3/2007 12:26:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00117	0.0102	10/3/2007 12:26:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00323	0.0102	10/3/2007 12:26:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00153	0.0102	10/3/2007 12:26:00 AM
2-Chloronaphthalene	ND	mg/L		0.00100	0.0102	10/3/2007 12:26:00 AM
2-Chlorophenol	ND	mg/L		0.00120	0.0102	10/3/2007 12:26:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00073	0.0102	10/3/2007 12:26:00 AM
Chrysene	ND	mg/L		0.00074	0.0102	10/3/2007 12:26:00 AM
o-Cresol	ND	mg/L		0.00098	0.0102	10/3/2007 12:26:00 AM
m,p-Cresol	ND	mg/L		0.00181	0.0205	10/3/2007 12:26:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00136	0.0102	10/3/2007 12:26:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00307	0.0102	10/3/2007 12:26:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00077	0.0102	10/3/2007 12:26:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00082	0.0102	10/3/2007 12:26:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00086	0.0102	10/3/2007 12:26:00 AM
3,3'-Dichlorobenzidine	ND	mg/L		0.00197	0.0102	10/3/2007 12:26:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00127	0.0102	10/3/2007 12:26:00 AM
Diethyl phthalate	ND	mg/L		0.00238	0.0102	10/3/2007 12:26:00 AM
Dimethyl phthalate	ND	mg/L		0.00260	0.0102	10/3/2007 12:26:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL7
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-05A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:35:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00147	0.0102	10/3/2007 12:26:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00229	0.0102	10/3/2007 12:26:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00196	0.0102	10/3/2007 12:26:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00188	0.0102	10/3/2007 12:26:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00191	0.0102	10/3/2007 12:26:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00197	0.0102	10/3/2007 12:26:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00089	0.0102	10/3/2007 12:26:00 AM
Fluoranthene	ND	mg/L		0.00160	0.0102	10/3/2007 12:26:00 AM
Fluorene	ND	mg/L		0.00078	0.0102	10/3/2007 12:26:00 AM
Hexachlorobenzene	ND	mg/L		0.00093	0.0102	10/3/2007 12:26:00 AM
Hexachlorobutadiene	ND	mg/L		0.00118	0.0102	10/3/2007 12:26:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00201	0.0102	10/3/2007 12:26:00 AM
Hexachloroethane	ND	mg/L		0.00097	0.0102	10/3/2007 12:26:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00200	0.0102	10/3/2007 12:26:00 AM
Isophorone	ND	mg/L		0.00084	0.0102	10/3/2007 12:26:00 AM
Naphthalene	ND	mg/L		0.00064	0.0102	10/3/2007 12:26:00 AM
Nitrobenzene	ND	mg/L		0.00114	0.0102	10/3/2007 12:26:00 AM
2-Nitrophenol	ND	mg/L		0.00233	0.0102	10/3/2007 12:26:00 AM
4-Nitrophenol	ND	mg/L		0.00152	0.0102	10/3/2007 12:26:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00135	0.0102	10/3/2007 12:26:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00104	0.0102	10/3/2007 12:26:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00103	0.0102	10/3/2007 12:26:00 AM
Pentachlorophenol	ND	mg/L		0.00200	0.0102	10/3/2007 12:26:00 AM
Phenanthrene	ND	mg/L		0.00089	0.0102	10/3/2007 12:26:00 AM
Phenol	ND	mg/L		0.00097	0.0102	10/3/2007 12:26:00 AM
Pyrene	ND	mg/L		0.00121	0.0102	10/3/2007 12:26:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00100	0.0102	10/3/2007 12:26:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00201	0.0102	10/3/2007 12:26:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00188	0.0102	10/3/2007 12:26:00 AM
Surr: 2-Fluorophenol	55.8	%REC			21-110	10/3/2007 12:26:00 AM
Surr: Phenol-d5	36.1	%REC			10-110	10/3/2007 12:26:00 AM
Surr: 2,4,6-Tribromophenol	96.1	%REC			10-123	10/3/2007 12:26:00 AM
Surr: Nitrobenzene-d5	88.1	%REC			35-114	10/3/2007 12:26:00 AM
Surr: 2-Fluorobiphenyl	78.5	%REC			43-116	10/3/2007 12:26:00 AM
Surr: 4-Terphenyl-d14	111	%REC			33-141	10/3/2007 12:26:00 AM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/3/2007 12:26:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-05A
Client Sample ID:	LL7	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:35:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS				**SW8270C**		Analyst: **CLS**

NOTES:
The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.

VOLATILE ORGANIC COMPOUNDS				**SW8260B**		Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 2:17:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 2:17:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 2:17:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 2:17:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 2:17:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 2:17:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 2:17:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 2:17:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 2:17:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 2:17:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 2:17:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 2:17:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 2:17:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 2:17:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 2:17:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 2:17:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 2:17:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 2:17:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 2:17:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 2:17:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 2:17:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 2:17:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 2:17:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 2:17:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 2:17:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 2:17:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 2:17:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 2:17:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 2:17:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 2:17:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 2:17:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 2:17:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 2:17:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL7
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-05A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 10:35:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 2:17:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 2:17:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 2:17:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 2:17:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 2:17:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 2:17:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 2:17:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 2:17:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 2:17:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 2:17:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 2:17:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 2:17:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 2:17:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 2:17:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 2:17:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 2:17:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 2:17:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 2:17:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 2:17:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 2:17:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 2:17:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 2:17:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 2:17:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 2:17:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 2:17:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 2:17:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 2:17:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 2:17:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 2:17:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 2:17:00 AM
1,2,4-Trimethylbenzene	0.6	µg/L	J	0.28	1.0	9/29/2007 2:17:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 2:17:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 2:17:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 2:17:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 2:17:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 2:17:00 AM
Surr: 1,2-Dichloroethane-d4	90.5	%REC			80-120	9/29/2007 2:17:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-05A
Client Sample ID:	LL7	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:35:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	92.5	%REC			86-115	9/29/2007 2:17:00 AM
Surr: Dibromofluoromethane	102	%REC			80-120	9/29/2007 2:17:00 AM
Surr: Toluene-d8	100	%REC			88-110	9/29/2007 2:17:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 2:17:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **DB**
Iron Related Bacteria	25,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	50,000	CFU/mL		NA	100	9/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	62.5	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	0.44	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	38.6	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,410	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	798	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	2	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	23.4	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	611	mg/L		1.00	1.0	9/26/2007 11:39:00 AM

Key:

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-05A
Client Sample ID:	LL7	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 10:35:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	2.5	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	613	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.64	SU		0	NA	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL6
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-06A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 1:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.264	mg/L		0.0200	0.100	10/8/2007 3:13:00 PM
Calcium	51.7	mg/L		0.100	0.500	10/3/2007 3:15:00 AM
Iron	ND	mg/L		0.0200	0.100	10/3/2007 3:15:00 AM
Magnesium	26.3	mg/L		0.400	0.500	10/3/2007 3:15:00 AM
Manganese	0.090	mg/L		0.0010	0.050	10/3/2007 3:15:00 AM
Potassium	13.7	mg/L		0.300	1.00	10/3/2007 3:15:00 AM
Silicon	1.72	mg/L		0.0100	0.100	10/10/2007 8:36:00 PM
Sodium	304	mg/L		0.100	0.500	10/3/2007 3:15:00 AM
Zinc	0.060	mg/L		0.0030	0.050	10/3/2007 3:15:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.317	mg/L		0.0200	0.100	10/8/2007 1:17:00 PM
Calcium	51.6	mg/L		0.100	0.500	10/3/2007 1:31:00 AM
Iron	0.038	mg/L	J	0.0200	0.100	10/3/2007 1:31:00 AM
Magnesium	26.0	mg/L		0.400	0.500	10/3/2007 1:31:00 AM
Manganese	0.227	mg/L		0.0010	0.050	10/3/2007 1:31:00 AM
Potassium	13.7	mg/L		0.300	1.00	10/3/2007 1:31:00 AM
Silicon	1.29	mg/L		0.0100	0.100	10/10/2007 6:50:00 PM
Sodium	305	mg/L		0.100	0.500	10/3/2007 1:31:00 AM
Zinc	0.019	mg/L	J	0.0030	0.050	10/3/2007 1:31:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 6:06:55 PM
Arsenic	0.0018	mg/L	J	0.00100	0.0050	9/27/2007 6:06:55 PM
Barium	0.0377	mg/L		0.00100	0.0050	9/27/2007 6:06:55 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 6:06:55 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 6:06:55 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 6:06:55 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 6:06:55 PM
Copper	0.0019	mg/L	J	0.00100	0.0050	9/27/2007 6:06:55 PM
Lead	ND	mg/L		0.00020	0.0010	9/27/2007 6:06:55 PM
Molybdenum	0.0086	mg/L		0.00100	0.0050	9/27/2007 6:06:55 PM
Nickel	0.0044	mg/L	J	0.00200	0.0100	9/27/2007 6:06:55 PM
Selenium	0.0295	mg/L		0.00100	0.0050	9/27/2007 6:06:55 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 6:06:55 PM
Strontium	1.09	mg/L		0.00100	0.0050	9/27/2007 6:06:55 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 6:06:55 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 6:06:55 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-06A
Client Sample ID:	LL6	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:30:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**

NOTES:
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 4:27:30 PM
Arsenic	0.0020	mg/L	J	0.00100	0.0050	9/27/2007 4:27:30 PM
Barium	0.0414	mg/L		0.00100	0.0050	9/27/2007 4:27:30 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 4:27:30 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 4:27:30 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 4:27:30 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 4:27:30 PM
Copper	0.0030	mg/L	J	0.00100	0.0050	9/27/2007 4:27:30 PM
Lead	0.0002	mg/L	J	0.00020	0.0010	9/27/2007 4:27:30 PM
Molybdenum	0.0083	mg/L		0.00100	0.0050	9/27/2007 4:27:30 PM
Nickel	0.0050	mg/L	J	0.00200	0.0100	9/27/2007 4:27:30 PM
Selenium	0.0301	mg/L		0.00100	0.0050	9/27/2007 4:27:30 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 4:27:30 PM
Strontium	1.10	mg/L		0.00100	0.0050	9/27/2007 4:27:30 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 4:27:30 PM
Vanadium	0.0011	mg/L	J	0.00100	0.0100	9/27/2007 4:27:30 PM

NOTES:
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:19:00 AM

MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:18:00 AM

SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 3:10:52 PM

SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.045	0.10	10/3/2007 1:01:10 AM

Key:				
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL6
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-06A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 1:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.047	0.25	10/3/2007 1:01:10 AM
Surr: o-Terphenyl	83.7	%REC			30-130	10/3/2007 1:01:10 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 8:15:20 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00068	0.0102	10/2/2007 11:56:00 PM
Acenaphthylene	ND	mg/L		0.00097	0.0102	10/2/2007 11:56:00 PM
Anthracene	ND	mg/L		0.00126	0.0102	10/2/2007 11:56:00 PM
Benzidine	ND	mg/L		0.00072	0.0102	10/2/2007 11:56:00 PM
Benzo(a)anthracene	ND	mg/L		0.00093	0.0102	10/2/2007 11:56:00 PM
Benzo(a)pyrene	ND	mg/L		0.00121	0.0102	10/2/2007 11:56:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00148	0.0102	10/2/2007 11:56:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00192	0.0102	10/2/2007 11:56:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00129	0.0102	10/2/2007 11:56:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00070	0.0102	10/2/2007 11:56:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00091	0.0102	10/2/2007 11:56:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00093	0.0102	10/2/2007 11:56:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00610	0.0102	10/2/2007 11:56:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00116	0.0102	10/2/2007 11:56:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00321	0.0102	10/2/2007 11:56:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00152	0.0102	10/2/2007 11:56:00 PM
2-Chloronaphthalene	ND	mg/L		0.00099	0.0102	10/2/2007 11:56:00 PM
2-Chlorophenol	ND	mg/L		0.00119	0.0102	10/2/2007 11:56:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00072	0.0102	10/2/2007 11:56:00 PM
Chrysene	ND	mg/L		0.00074	0.0102	10/2/2007 11:56:00 PM
o-Cresol	ND	mg/L		0.00097	0.0102	10/2/2007 11:56:00 PM
m,p-Cresol	ND	mg/L		0.00180	0.0203	10/2/2007 11:56:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00135	0.0102	10/2/2007 11:56:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00305	0.0102	10/2/2007 11:56:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00077	0.0102	10/2/2007 11:56:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00082	0.0102	10/2/2007 11:56:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00085	0.0102	10/2/2007 11:56:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00195	0.0102	10/2/2007 11:56:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00127	0.0102	10/2/2007 11:56:00 PM
Diethyl phthalate	ND	mg/L		0.00237	0.0102	10/2/2007 11:56:00 PM
Dimethyl phthalate	ND	mg/L		0.00259	0.0102	10/2/2007 11:56:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-06A
Client Sample ID:	LL6	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:30:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00146	0.0102	10/2/2007 11:56:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00227	0.0102	10/2/2007 11:56:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00194	0.0102	10/2/2007 11:56:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00187	0.0102	10/2/2007 11:56:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00190	0.0102	10/2/2007 11:56:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00196	0.0102	10/2/2007 11:56:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00088	0.0102	10/2/2007 11:56:00 PM
Fluoranthene	ND	mg/L		0.00159	0.0102	10/2/2007 11:56:00 PM
Fluorene	ND	mg/L		0.00078	0.0102	10/2/2007 11:56:00 PM
Hexachlorobenzene	ND	mg/L		0.00092	0.0102	10/2/2007 11:56:00 PM
Hexachlorobutadiene	ND	mg/L		0.00117	0.0102	10/2/2007 11:56:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00200	0.0102	10/2/2007 11:56:00 PM
Hexachloroethane	ND	mg/L		0.00096	0.0102	10/2/2007 11:56:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00199	0.0102	10/2/2007 11:56:00 PM
Isophorone	ND	mg/L		0.00083	0.0102	10/2/2007 11:56:00 PM
Naphthalene	ND	mg/L		0.00063	0.0102	10/2/2007 11:56:00 PM
Nitrobenzene	ND	mg/L		0.00113	0.0102	10/2/2007 11:56:00 PM
2-Nitrophenol	ND	mg/L		0.00232	0.0102	10/2/2007 11:56:00 PM
4-Nitrophenol	ND	mg/L		0.00151	0.0102	10/2/2007 11:56:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00134	0.0102	10/2/2007 11:56:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00104	0.0102	10/2/2007 11:56:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00102	0.0102	10/2/2007 11:56:00 PM
Pentachlorophenol	ND	mg/L		0.00199	0.0102	10/2/2007 11:56:00 PM
Phenanthrene	ND	mg/L		0.00088	0.0102	10/2/2007 11:56:00 PM
Phenol	ND	mg/L		0.00097	0.0102	10/2/2007 11:56:00 PM
Pyrene	ND	mg/L		0.00121	0.0102	10/2/2007 11:56:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00099	0.0102	10/2/2007 11:56:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00200	0.0102	10/2/2007 11:56:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00187	0.0102	10/2/2007 11:56:00 PM
Surr: 2-Fluorophenol	57.7	%REC			21-110	10/2/2007 11:56:00 PM
Surr: Phenol-d5	36.5	%REC			10-110	10/2/2007 11:56:00 PM
Surr: 2,4,6-Tribromophenol	94.6	%REC			10-123	10/2/2007 11:56:00 PM
Surr: Nitrobenzene-d5	88.9	%REC			35-114	10/2/2007 11:56:00 PM
Surr: 2-Fluorobiphenyl	80.3	%REC			43-116	10/2/2007 11:56:00 PM
Surr: 4-Terphenyl-d14	108	%REC			33-141	10/2/2007 11:56:00 PM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/2/2007 11:56:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-06A
Client Sample ID:	LL6	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:30:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS				**SW8270C**		Analyst: **CLS**

NOTES:
The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.

VOLATILE ORGANIC COMPOUNDS				**SW8260B**		Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 2:50:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 2:50:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 2:50:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 2:50:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 2:50:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 2:50:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 2:50:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 2:50:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 2:50:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 2:50:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 2:50:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 2:50:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 2:50:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 2:50:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 2:50:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 2:50:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 2:50:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 2:50:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 2:50:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 2:50:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 2:50:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 2:50:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 2:50:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 2:50:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 2:50:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 2:50:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 2:50:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 2:50:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 2:50:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 2:50:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 2:50:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 2:50:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 2:50:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL6
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-06A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 1:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 2:50:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 2:50:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 2:50:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 2:50:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 2:50:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 2:50:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 2:50:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 2:50:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 2:50:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 2:50:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 2:50:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 2:50:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 2:50:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 2:50:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 2:50:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 2:50:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 2:50:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 2:50:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 2:50:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 2:50:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 2:50:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 2:50:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 2:50:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 2:50:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 2:50:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 2:50:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 2:50:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 2:50:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 2:50:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 2:50:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 2:50:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 2:50:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 2:50:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 2:50:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 2:50:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 2:50:00 AM
Surr: 1,2-Dichloroethane-d4	89.9	%REC			80-120	9/29/2007 2:50:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL6
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-06A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 1:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	93.7	%REC			86-115	9/29/2007 2:50:00 AM
Surr: Dibromofluoromethane	99.0	%REC			80-120	9/29/2007 2:50:00 AM
Surr: Toluene-d8	99.7	%REC			88-110	9/29/2007 2:50:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 2:50:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **DB**
Iron Related Bacteria	25,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	2/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	40.6	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	0.51	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	954	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,980	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,230	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	13	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	146	mg/L		1.00	1.0	9/26/2007 11:39:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL6
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-06A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 1:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	6.3	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	153	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	8.66	SU		0	NA	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL8A SHALLOW POOL
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-07A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 11:25:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.065	mg/L	J	0.0200	0.100	10/8/2007 3:18:00 PM
Calcium	7.43	mg/L		0.100	0.500	10/3/2007 3:32:00 AM
Iron	0.389	mg/L		0.0200	0.100	10/3/2007 3:32:00 AM
Magnesium	1.83	mg/L		0.400	0.500	10/3/2007 3:32:00 AM
Manganese	0.152	mg/L		0.0010	0.050	10/3/2007 3:32:00 AM
Potassium	3.94	mg/L		0.300	1.00	10/3/2007 3:32:00 AM
Silicon	4.66	mg/L		0.0100	0.100	10/10/2007 8:41:00 PM
Sodium	337	mg/L		0.100	0.500	10/3/2007 3:32:00 AM
Zinc	0.005	mg/L	J	0.0030	0.050	10/3/2007 3:32:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.062	mg/L	J	0.0200	0.100	10/8/2007 1:33:00 PM
Calcium	7.20	mg/L		0.100	0.500	10/3/2007 1:37:00 AM
Iron	2.53	mg/L		0.0200	0.100	10/3/2007 1:37:00 AM
Magnesium	1.77	mg/L		0.400	0.500	10/3/2007 1:37:00 AM
Manganese	0.166	mg/L		0.0010	0.050	10/3/2007 1:37:00 AM
Potassium	3.76	mg/L		0.300	1.00	10/3/2007 1:37:00 AM
Silicon	4.47	mg/L		0.0100	0.100	10/10/2007 6:55:00 PM
Sodium	332	mg/L		0.100	0.500	10/3/2007 1:37:00 AM
Zinc	ND	mg/L		0.0030	0.050	10/3/2007 1:37:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 6:12:45 PM
Arsenic	0.0011	mg/L	J	0.00100	0.0050	9/27/2007 6:12:45 PM
Barium	0.185	mg/L		0.00100	0.0050	9/27/2007 6:12:45 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 6:12:45 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 6:12:45 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 6:12:45 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 6:12:45 PM
Copper	ND	mg/L		0.00100	0.0050	9/27/2007 6:12:45 PM
Lead	ND	mg/L		0.00020	0.0010	9/27/2007 6:12:45 PM
Molybdenum	0.0027	mg/L	J	0.00100	0.0050	9/27/2007 6:12:45 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 6:12:45 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 6:12:45 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 6:12:45 PM
Strontium	0.281	mg/L		0.00100	0.0050	9/27/2007 6:12:45 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 6:12:45 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 6:12:45 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-07A
Client Sample ID:	LL8A SHALLOW POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 11:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS				**E200.8**		Analyst: **DBB**

NOTES:

The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

TOTAL RECOVERABLE METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 4:33:22 PM
Arsenic	0.0011	mg/L	J	0.00100	0.0050	9/27/2007 4:33:22 PM
Barium	0.232	mg/L		0.00100	0.0050	9/27/2007 4:33:22 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 4:33:22 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 4:33:22 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 4:33:22 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 4:33:22 PM
Copper	ND	mg/L		0.00100	0.0050	9/27/2007 4:33:22 PM
Lead	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 4:33:22 PM
Molybdenum	0.0028	mg/L	J	0.00100	0.0050	9/27/2007 4:33:22 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 4:33:22 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 4:33:22 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 4:33:22 PM
Strontium	0.310	mg/L		0.00100	0.0050	9/27/2007 4:33:22 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 4:33:22 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 4:33:22 PM

NOTES:

The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, DISSOLVED				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:22:00 AM

MERCURY, TOTAL				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:20:00 AM

SEMIVOLATILE ORGANIC COMPOUNDS				**SW8032A**		Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 3:23:23 PM

SEMI-VOLATILE RANGE ORGANICS				**SW8015B**		Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.045	0.10	10/3/2007 1:35:05 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL8A SHALLOW POOL
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-07A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 11:25:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.047	0.25	10/3/2007 1:35:05 AM
Surr: o-Terphenyl	85.6	%REC			30-130	10/3/2007 1:35:05 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 8:47:17 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00068	0.0101	10/2/2007 11:26:00 PM
Acenaphthylene	ND	mg/L		0.00096	0.0101	10/2/2007 11:26:00 PM
Anthracene	ND	mg/L		0.00126	0.0101	10/2/2007 11:26:00 PM
Benzidine	ND	mg/L		0.00072	0.0101	10/2/2007 11:26:00 PM
Benzo(a)anthracene	ND	mg/L		0.00093	0.0101	10/2/2007 11:26:00 PM
Benzo(a)pyrene	ND	mg/L		0.00120	0.0101	10/2/2007 11:26:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00148	0.0101	10/2/2007 11:26:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00191	0.0101	10/2/2007 11:26:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00128	0.0101	10/2/2007 11:26:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00070	0.0101	10/2/2007 11:26:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00091	0.0101	10/2/2007 11:26:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00092	0.0101	10/2/2007 11:26:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00608	0.0101	10/2/2007 11:26:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00116	0.0101	10/2/2007 11:26:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00320	0.0101	10/2/2007 11:26:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00152	0.0101	10/2/2007 11:26:00 PM
2-Chloronaphthalene	ND	mg/L		0.00099	0.0101	10/2/2007 11:26:00 PM
2-Chlorophenol	ND	mg/L		0.00119	0.0101	10/2/2007 11:26:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00072	0.0101	10/2/2007 11:26:00 PM
Chrysene	ND	mg/L		0.00073	0.0101	10/2/2007 11:26:00 PM
o-Cresol	ND	mg/L		0.00097	0.0101	10/2/2007 11:26:00 PM
m,p-Cresol	ND	mg/L		0.00179	0.0203	10/2/2007 11:26:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00135	0.0101	10/2/2007 11:26:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00304	0.0101	10/2/2007 11:26:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00077	0.0101	10/2/2007 11:26:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00081	0.0101	10/2/2007 11:26:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00085	0.0101	10/2/2007 11:26:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00195	0.0101	10/2/2007 11:26:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00126	0.0101	10/2/2007 11:26:00 PM
Diethyl phthalate	ND	mg/L		0.00236	0.0101	10/2/2007 11:26:00 PM
Dimethyl phthalate	ND	mg/L		0.00258	0.0101	10/2/2007 11:26:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL8A SHALLOW POOL
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-07A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 11:25:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00145	0.0101	10/2/2007 11:26:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00227	0.0101	10/2/2007 11:26:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00194	0.0101	10/2/2007 11:26:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00186	0.0101	10/2/2007 11:26:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00190	0.0101	10/2/2007 11:26:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00195	0.0101	10/2/2007 11:26:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00088	0.0101	10/2/2007 11:26:00 PM
Fluoranthene	ND	mg/L		0.00159	0.0101	10/2/2007 11:26:00 PM
Fluorene	ND	mg/L		0.00077	0.0101	10/2/2007 11:26:00 PM
Hexachlorobenzene	ND	mg/L		0.00092	0.0101	10/2/2007 11:26:00 PM
Hexachlorobutadiene	ND	mg/L		0.00116	0.0101	10/2/2007 11:26:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00199	0.0101	10/2/2007 11:26:00 PM
Hexachloroethane	ND	mg/L		0.00096	0.0101	10/2/2007 11:26:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00198	0.0101	10/2/2007 11:26:00 PM
Isophorone	ND	mg/L		0.00083	0.0101	10/2/2007 11:26:00 PM
Naphthalene	ND	mg/L		0.00063	0.0101	10/2/2007 11:26:00 PM
Nitrobenzene	ND	mg/L		0.00113	0.0101	10/2/2007 11:26:00 PM
2-Nitrophenol	ND	mg/L		0.00231	0.0101	10/2/2007 11:26:00 PM
4-Nitrophenol	ND	mg/L		0.00151	0.0101	10/2/2007 11:26:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00134	0.0101	10/2/2007 11:26:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00103	0.0101	10/2/2007 11:26:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00102	0.0101	10/2/2007 11:26:00 PM
Pentachlorophenol	ND	mg/L		0.00198	0.0101	10/2/2007 11:26:00 PM
Phenanthrene	ND	mg/L		0.00088	0.0101	10/2/2007 11:26:00 PM
Phenol	ND	mg/L		0.00096	0.0101	10/2/2007 11:26:00 PM
Pyrene	ND	mg/L		0.00120	0.0101	10/2/2007 11:26:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00099	0.0101	10/2/2007 11:26:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00199	0.0101	10/2/2007 11:26:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00186	0.0101	10/2/2007 11:26:00 PM
Surr: 2-Fluorophenol	50.0	%REC			21-110	10/2/2007 11:26:00 PM
Surr: Phenol-d5	34.6	%REC			10-110	10/2/2007 11:26:00 PM
Surr: 2,4,6-Tribromophenol	79.5	%REC			10-123	10/2/2007 11:26:00 PM
Surr: Nitrobenzene-d5	73.6	%REC			35-114	10/2/2007 11:26:00 PM
Surr: 2-Fluorobiphenyl	67.7	%REC			43-116	10/2/2007 11:26:00 PM
Surr: 4-Terphenyl-d14	92.8	%REC			33-141	10/2/2007 11:26:00 PM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/2/2007 11:26:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-07A
Client Sample ID:	LL8A SHALLOW POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 11:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
NOTES: The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.						
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 3:22:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 3:22:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 3:22:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 3:22:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 3:22:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 3:22:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 3:22:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 3:22:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 3:22:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 3:22:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 3:22:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 3:22:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 3:22:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 3:22:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 3:22:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 3:22:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 3:22:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 3:22:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 3:22:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 3:22:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 3:22:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 3:22:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 3:22:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 3:22:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 3:22:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 3:22:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 3:22:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 3:22:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 3:22:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 3:22:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 3:22:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 3:22:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 3:22:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-07A
Client Sample ID:	LL8A SHALLOW POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 11:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 3:22:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 3:22:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 3:22:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 3:22:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 3:22:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 3:22:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 3:22:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 3:22:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 3:22:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 3:22:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 3:22:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 3:22:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 3:22:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 3:22:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 3:22:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 3:22:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 3:22:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 3:22:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 3:22:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 3:22:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 3:22:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 3:22:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 3:22:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 3:22:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 3:22:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 3:22:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 3:22:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 3:22:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 3:22:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 3:22:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 3:22:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 3:22:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 3:22:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 3:22:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 3:22:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 3:22:00 AM
Surr: 1,2-Dichloroethane-d4	92.7	%REC			80-120	9/29/2007 3:22:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-07A
Client Sample ID:	LL8A SHALLOW POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 11:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	94.8	%REC			86-115	9/29/2007 3:22:00 AM
Surr: Dibromofluoromethane	102	%REC			80-120	9/29/2007 3:22:00 AM
Surr: Toluene-d8	99.5	%REC			88-110	9/29/2007 3:22:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 3:22:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **DB**
Iron Related Bacteria	25,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	9/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	72.5	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	0.66	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	67.8	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.89	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,500	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	906	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	8	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	9.6	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	617	mg/L		1.00	1.0	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-07A
Client Sample ID:	LL8A SHALLOW POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 11:25:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	4.3	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	621	mg/L		1.00	1.0	9/26/2007 11:39:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.87	SU		0	NA	9/26/2007 11:39:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL8B DEEP POOL
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-08A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 1:35:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.070	mg/L	J	0.0200	0.100	10/8/2007 3:24:00 PM
Calcium	6.92	mg/L		0.100	0.500	10/3/2007 3:38:00 AM
Iron	0.808	mg/L		0.0200	0.100	10/3/2007 3:38:00 AM
Magnesium	1.22	mg/L		0.400	0.500	10/3/2007 3:38:00 AM
Manganese	0.138	mg/L		0.0010	0.050	10/3/2007 3:38:00 AM
Potassium	3.57	mg/L		0.300	1.00	10/3/2007 3:38:00 AM
Silicon	4.64	mg/L		0.0100	0.100	10/10/2007 8:46:00 PM
Sodium	316	mg/L		0.100	0.500	10/3/2007 3:38:00 AM
Zinc	0.005	mg/L	J	0.0030	0.050	10/3/2007 3:38:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.062	mg/L	J	0.0200	0.100	10/8/2007 1:39:00 PM
Calcium	7.40	mg/L		0.100	0.500	10/3/2007 1:42:00 AM
Iron	2.33	mg/L		0.0200	0.100	10/3/2007 1:42:00 AM
Magnesium	1.73	mg/L		0.400	0.500	10/3/2007 1:42:00 AM
Manganese	0.186	mg/L		0.0010	0.050	10/3/2007 1:42:00 AM
Potassium	3.83	mg/L		0.300	1.00	10/3/2007 1:42:00 AM
Silicon	4.52	mg/L		0.0100	0.100	10/10/2007 7:00:00 PM
Sodium	337	mg/L		0.100	0.500	10/3/2007 1:42:00 AM
Zinc	0.021	mg/L	J	0.0030	0.050	10/3/2007 1:42:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 6:18:36 PM
Arsenic	0.0012	mg/L	J	0.00100	0.0050	9/27/2007 6:18:36 PM
Barium	0.205	mg/L		0.00100	0.0050	9/27/2007 6:18:36 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 6:18:36 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 6:18:36 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 6:18:36 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 6:18:36 PM
Copper	ND	mg/L		0.00100	0.0050	9/27/2007 6:18:36 PM
Lead	ND	mg/L		0.00020	0.0010	9/27/2007 6:18:36 PM
Molybdenum	0.0027	mg/L	J	0.00100	0.0050	9/27/2007 6:18:36 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 6:18:36 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 6:18:36 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 6:18:36 PM
Strontium	0.287	mg/L		0.00100	0.0050	9/27/2007 6:18:36 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 6:18:36 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 6:18:36 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-08A
Client Sample ID:	LL8B DEEP POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:35:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 4:50:53 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Barium	0.236	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Beryllium	ND	mg/L		0.00020	0.0010	9/27/2007 4:50:53 PM
Cadmium	ND	mg/L		0.00020	0.0010	9/27/2007 4:50:53 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Cobalt	ND	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Copper	ND	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Lead	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 4:50:53 PM
Molybdenum	0.0027	mg/L	J	0.00100	0.0050	9/27/2007 4:50:53 PM
Nickel	ND	mg/L		0.00200	0.0100	9/27/2007 4:50:53 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Strontium	0.304	mg/L		0.00100	0.0050	9/27/2007 4:50:53 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 4:50:53 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 4:50:53 PM
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:27:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:26:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 3:35:58 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.046	0.10	10/3/2007 1:01:10 AM
TPH (Oil Range)	ND	mg/L		0.048	0.26	10/3/2007 1:01:10 AM
Surr: o-Terphenyl	95.9	%REC			30-130	10/3/2007 1:01:10 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 9:18:26 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00068	0.0102	10/2/2007 10:57:00 PM
Acenaphthylene	ND	mg/L		0.00097	0.0102	10/2/2007 10:57:00 PM
Anthracene	ND	mg/L		0.00126	0.0102	10/2/2007 10:57:00 PM
Benzidine	ND	mg/L		0.00072	0.0102	10/2/2007 10:57:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-08A
Client Sample ID:	LL8B DEEP POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:35:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Benzo(a)anthracene	ND	mg/L		0.00093	0.0102	10/2/2007 10:57:00 PM
Benzo(a)pyrene	ND	mg/L		0.00121	0.0102	10/2/2007 10:57:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00149	0.0102	10/2/2007 10:57:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00192	0.0102	10/2/2007 10:57:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00129	0.0102	10/2/2007 10:57:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00070	0.0102	10/2/2007 10:57:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00091	0.0102	10/2/2007 10:57:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00093	0.0102	10/2/2007 10:57:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00610	0.0102	10/2/2007 10:57:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00116	0.0102	10/2/2007 10:57:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00321	0.0102	10/2/2007 10:57:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00152	0.0102	10/2/2007 10:57:00 PM
2-Chloronaphthalene	ND	mg/L		0.00099	0.0102	10/2/2007 10:57:00 PM
2-Chlorophenol	ND	mg/L		0.00119	0.0102	10/2/2007 10:57:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00072	0.0102	10/2/2007 10:57:00 PM
Chrysene	ND	mg/L		0.00074	0.0102	10/2/2007 10:57:00 PM
o-Cresol	ND	mg/L		0.00097	0.0102	10/2/2007 10:57:00 PM
m,p-Cresol	ND	mg/L		0.00180	0.0203	10/2/2007 10:57:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00136	0.0102	10/2/2007 10:57:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00305	0.0102	10/2/2007 10:57:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00077	0.0102	10/2/2007 10:57:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00082	0.0102	10/2/2007 10:57:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00085	0.0102	10/2/2007 10:57:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00195	0.0102	10/2/2007 10:57:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00127	0.0102	10/2/2007 10:57:00 PM
Diethyl phthalate	ND	mg/L		0.00237	0.0102	10/2/2007 10:57:00 PM
Dimethyl phthalate	ND	mg/L		0.00259	0.0102	10/2/2007 10:57:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00146	0.0102	10/2/2007 10:57:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00227	0.0102	10/2/2007 10:57:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00194	0.0102	10/2/2007 10:57:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00187	0.0102	10/2/2007 10:57:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00190	0.0102	10/2/2007 10:57:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00196	0.0102	10/2/2007 10:57:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00088	0.0102	10/2/2007 10:57:00 PM
Fluoranthene	ND	mg/L		0.00159	0.0102	10/2/2007 10:57:00 PM
Fluorene	ND	mg/L		0.00078	0.0102	10/2/2007 10:57:00 PM
Hexachlorobenzene	ND	mg/L		0.00092	0.0102	10/2/2007 10:57:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-08A
Client Sample ID:	LL8B DEEP POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:35:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Hexachlorobutadiene	ND	mg/L		0.00117	0.0102	10/2/2007 10:57:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00200	0.0102	10/2/2007 10:57:00 PM
Hexachloroethane	ND	mg/L		0.00096	0.0102	10/2/2007 10:57:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00199	0.0102	10/2/2007 10:57:00 PM
Isophorone	ND	mg/L		0.00083	0.0102	10/2/2007 10:57:00 PM
Naphthalene	ND	mg/L		0.00063	0.0102	10/2/2007 10:57:00 PM
Nitrobenzene	ND	mg/L		0.00113	0.0102	10/2/2007 10:57:00 PM
2-Nitrophenol	ND	mg/L		0.00232	0.0102	10/2/2007 10:57:00 PM
4-Nitrophenol	ND	mg/L		0.00151	0.0102	10/2/2007 10:57:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00134	0.0102	10/2/2007 10:57:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00104	0.0102	10/2/2007 10:57:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00102	0.0102	10/2/2007 10:57:00 PM
Pentachlorophenol	ND	mg/L		0.00199	0.0102	10/2/2007 10:57:00 PM
Phenanthrene	ND	mg/L		0.00088	0.0102	10/2/2007 10:57:00 PM
Phenol	ND	mg/L		0.00097	0.0102	10/2/2007 10:57:00 PM
Pyrene	ND	mg/L		0.00121	0.0102	10/2/2007 10:57:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00099	0.0102	10/2/2007 10:57:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00200	0.0102	10/2/2007 10:57:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00187	0.0102	10/2/2007 10:57:00 PM
Surr: 2-Fluorophenol	54.8	%REC			21-110	10/2/2007 10:57:00 PM
Surr: Phenol-d5	36.5	%REC			10-110	10/2/2007 10:57:00 PM
Surr: 2,4,6-Tribromophenol	97.7	%REC			10-123	10/2/2007 10:57:00 PM
Surr: Nitrobenzene-d5	88.2	%REC			35-114	10/2/2007 10:57:00 PM
Surr: 2-Fluorobiphenyl	81.4	%REC			43-116	10/2/2007 10:57:00 PM
Surr: 4-Terphenyl-d14	114	%REC			33-141	10/2/2007 10:57:00 PM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/2/2007 10:57:00 PM

NOTES:

The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 3:55:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 3:55:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 3:55:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 3:55:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 3:55:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 3:55:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 3:55:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
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REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-08A
Client Sample ID:	LL8B DEEP POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:35:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 3:55:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 3:55:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 3:55:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 3:55:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 3:55:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 3:55:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 3:55:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 3:55:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 3:55:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 3:55:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 3:55:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 3:55:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 3:55:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 3:55:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 3:55:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 3:55:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 3:55:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 3:55:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 3:55:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 3:55:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 3:55:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 3:55:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 3:55:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 3:55:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 3:55:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 3:55:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 3:55:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 3:55:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 3:55:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 3:55:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 3:55:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 3:55:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 3:55:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 3:55:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 3:55:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 3:55:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 3:55:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-08A
Client Sample ID:	LL8B DEEP POOL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007 1:35:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 3:55:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 3:55:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 3:55:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 3:55:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 3:55:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 3:55:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 3:55:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 3:55:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 3:55:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 3:55:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 3:55:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 3:55:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 3:55:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 3:55:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 3:55:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 3:55:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 3:55:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 3:55:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 3:55:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 3:55:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 3:55:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 3:55:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 3:55:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 3:55:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 3:55:00 AM
Surr: 1,2-Dichloroethane-d4	90.9	%REC			80-120	9/29/2007 3:55:00 AM
Surr: 4-Bromofluorobenzene	96.2	%REC			86-115	9/29/2007 3:55:00 AM
Surr: Dibromofluoromethane	101	%REC			80-120	9/29/2007 3:55:00 AM
Surr: Toluene-d8	99.5	%REC			88-110	9/29/2007 3:55:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 3:55:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **DB**
Iron Related Bacteria	25,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	50,000	CFU/mL		NA	100	9/25/2007 5:20:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL8B DEEP POOL
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-08A
DateReceived: 9/25/2007
Collection Date: 9/25/2007 1:35:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	72.0	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	0.60	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	66.6	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.97	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	1,500	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	807	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	5	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	13.0	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	611	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	5.5	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	616	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.98	SU		0	NA	9/27/2007 9:31:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-09A
Client Sample ID:	LL12 SEEP	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	1.65	mg/L		0.0200	0.100	10/8/2007 3:30:00 PM
Calcium	285	mg/L		0.100	0.500	10/3/2007 3:44:00 AM
Iron	42.8	mg/L		0.0200	0.100	10/3/2007 3:44:00 AM
Magnesium	184	mg/L		0.400	0.500	10/3/2007 3:44:00 AM
Manganese	20.7	mg/L		0.0010	0.050	10/3/2007 3:44:00 AM
Potassium	8.11	mg/L		0.300	1.00	10/3/2007 3:44:00 AM
Silicon	8.22	mg/L		0.0100	0.100	10/10/2007 8:50:00 PM
Sodium	68.2	mg/L		0.100	0.500	10/3/2007 3:44:00 AM
Zinc	0.192	mg/L		0.0030	0.050	10/3/2007 3:44:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	11.1	mg/L		0.0200	0.100	10/8/2007 1:45:00 PM
Calcium	289	mg/L		0.100	0.500	10/3/2007 1:48:00 AM
Iron	43.5	mg/L		0.0200	0.100	10/3/2007 1:48:00 AM
Magnesium	189	mg/L		0.400	0.500	10/3/2007 1:48:00 AM
Manganese	21.2	mg/L		0.0010	0.050	10/3/2007 1:48:00 AM
Potassium	8.20	mg/L		0.300	1.00	10/3/2007 1:48:00 AM
Silicon	8.60	mg/L		0.0100	0.100	10/10/2007 7:05:00 PM
Sodium	69.8	mg/L		0.100	0.500	10/3/2007 1:48:00 AM
Zinc	0.266	mg/L		0.0030	0.050	10/3/2007 1:48:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 6:24:27 PM
Arsenic	0.0011	mg/L	J	0.00100	0.0050	9/27/2007 6:24:27 PM
Barium	0.0438	mg/L		0.00100	0.0050	9/27/2007 6:24:27 PM
Beryllium	0.0092	mg/L		0.00020	0.0010	9/27/2007 6:24:27 PM
Cadmium	0.0006	mg/L	J	0.00020	0.0010	9/27/2007 6:24:27 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 6:24:27 PM
Cobalt	0.381	mg/L		0.00100	0.0050	9/27/2007 6:24:27 PM
Copper	0.0157	mg/L		0.00100	0.0050	9/27/2007 6:24:27 PM
Lead	0.0106	mg/L		0.00020	0.0010	9/27/2007 6:24:27 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 6:24:27 PM
Nickel	0.770	mg/L		0.00200	0.0100	9/27/2007 6:24:27 PM
Selenium	0.0039	mg/L	J	0.00100	0.0050	9/27/2007 6:24:27 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 6:24:27 PM
Strontium	2.78	mg/L		0.00100	0.0050	9/27/2007 6:24:27 PM
Thallium	0.0002	mg/L	J	0.00020	0.0010	9/27/2007 6:24:27 PM
Vanadium	0.0011	mg/L	J	0.00100	0.0100	9/27/2007 6:24:27 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-09A
Client Sample ID:	LL12 SEEP	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS				**E200.8**		Analyst: **DBB**

NOTES:
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

TOTAL RECOVERABLE METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 4:56:43 PM
Arsenic	0.0013	mg/L	J	0.00100	0.0050	9/27/2007 4:56:43 PM
Barium	0.0474	mg/L		0.00100	0.0050	9/27/2007 4:56:43 PM
Beryllium	0.0092	mg/L		0.00020	0.0010	9/27/2007 4:56:43 PM
Cadmium	0.0005	mg/L	J	0.00020	0.0010	9/27/2007 4:56:43 PM
Chromium	0.0012	mg/L	J	0.00100	0.0050	9/27/2007 4:56:43 PM
Cobalt	0.403	mg/L		0.00100	0.0050	9/27/2007 4:56:43 PM
Copper	0.0188	mg/L		0.00100	0.0050	9/27/2007 4:56:43 PM
Lead	0.0111	mg/L		0.00020	0.0010	9/27/2007 4:56:43 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 4:56:43 PM
Nickel	0.822	mg/L		0.00200	0.0100	9/27/2007 4:56:43 PM
Selenium	0.0054	mg/L		0.00100	0.0050	9/27/2007 4:56:43 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 4:56:43 PM
Strontium	2.96	mg/L		0.00100	0.0050	9/27/2007 4:56:43 PM
Thallium	0.0003	mg/L	J	0.00020	0.0010	9/27/2007 4:56:43 PM
Vanadium	0.0013	mg/L	J	0.00100	0.0100	9/27/2007 4:56:43 PM

NOTES:
The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.
The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, DISSOLVED				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:30:00 AM
MERCURY, TOTAL				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:29:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS				**SW8032A**		Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 3:48:32 PM
GLYCOLS, TOTAL				**GC-FID**		Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 9:50:19 PM

Key:				
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-09A
Client Sample ID:	LL12 SEEP	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00077	0.0115	10/2/2007 10:27:00 PM
Acenaphthylene	ND	mg/L		0.00110	0.0115	10/2/2007 10:27:00 PM
Anthracene	ND	mg/L		0.00143	0.0115	10/2/2007 10:27:00 PM
Benzidine	ND	mg/L		0.00082	0.0115	10/2/2007 10:27:00 PM
Benzo(a)anthracene	ND	mg/L		0.00106	0.0115	10/2/2007 10:27:00 PM
Benzo(a)pyrene	ND	mg/L		0.00137	0.0115	10/2/2007 10:27:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00168	0.0115	10/2/2007 10:27:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00217	0.0115	10/2/2007 10:27:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00146	0.0115	10/2/2007 10:27:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00079	0.0115	10/2/2007 10:27:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00103	0.0115	10/2/2007 10:27:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00105	0.0115	10/2/2007 10:27:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00692	0.0115	10/2/2007 10:27:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00132	0.0115	10/2/2007 10:27:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00364	0.0115	10/2/2007 10:27:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00173	0.0115	10/2/2007 10:27:00 PM
2-Chloronaphthalene	ND	mg/L		0.00112	0.0115	10/2/2007 10:27:00 PM
2-Chlorophenol	ND	mg/L		0.00135	0.0115	10/2/2007 10:27:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00082	0.0115	10/2/2007 10:27:00 PM
Chrysene	ND	mg/L		0.00083	0.0115	10/2/2007 10:27:00 PM
o-Cresol	ND	mg/L		0.00110	0.0115	10/2/2007 10:27:00 PM
m,p-Cresol	ND	mg/L		0.00204	0.0231	10/2/2007 10:27:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00154	0.0115	10/2/2007 10:27:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00346	0.0115	10/2/2007 10:27:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00087	0.0115	10/2/2007 10:27:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00093	0.0115	10/2/2007 10:27:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00097	0.0115	10/2/2007 10:27:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00221	0.0115	10/2/2007 10:27:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00143	0.0115	10/2/2007 10:27:00 PM
Diethyl phthalate	ND	mg/L		0.00268	0.0115	10/2/2007 10:27:00 PM
Dimethyl phthalate	ND	mg/L		0.00293	0.0115	10/2/2007 10:27:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00165	0.0115	10/2/2007 10:27:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00258	0.0115	10/2/2007 10:27:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00220	0.0115	10/2/2007 10:27:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00212	0.0115	10/2/2007 10:27:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00216	0.0115	10/2/2007 10:27:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00222	0.0115	10/2/2007 10:27:00 PM

Key:

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-09A
Client Sample ID:	LL12 SEEP	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/L		0.00100	0.0115	10/2/2007 10:27:00 PM
Fluoranthene	ND	mg/L		0.00180	0.0115	10/2/2007 10:27:00 PM
Fluorene	ND	mg/L		0.00088	0.0115	10/2/2007 10:27:00 PM
Hexachlorobenzene	ND	mg/L		0.00105	0.0115	10/2/2007 10:27:00 PM
Hexachlorobutadiene	ND	mg/L		0.00132	0.0115	10/2/2007 10:27:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00227	0.0115	10/2/2007 10:27:00 PM
Hexachloroethane	ND	mg/L		0.00109	0.0115	10/2/2007 10:27:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00225	0.0115	10/2/2007 10:27:00 PM
Isophorone	ND	mg/L		0.00094	0.0115	10/2/2007 10:27:00 PM
Naphthalene	ND	mg/L		0.00072	0.0115	10/2/2007 10:27:00 PM
Nitrobenzene	ND	mg/L		0.00128	0.0115	10/2/2007 10:27:00 PM
2-Nitrophenol	ND	mg/L		0.00263	0.0115	10/2/2007 10:27:00 PM
4-Nitrophenol	ND	mg/L		0.00171	0.0115	10/2/2007 10:27:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00152	0.0115	10/2/2007 10:27:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00118	0.0115	10/2/2007 10:27:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00116	0.0115	10/2/2007 10:27:00 PM
Pentachlorophenol	ND	mg/L		0.00226	0.0115	10/2/2007 10:27:00 PM
Phenanthrene	ND	mg/L		0.00100	0.0115	10/2/2007 10:27:00 PM
Phenol	ND	mg/L		0.00110	0.0115	10/2/2007 10:27:00 PM
Pyrene	ND	mg/L		0.00137	0.0115	10/2/2007 10:27:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00112	0.0115	10/2/2007 10:27:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00227	0.0115	10/2/2007 10:27:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00212	0.0115	10/2/2007 10:27:00 PM
Surr: 2-Fluorophenol	62.7	%REC			21-110	10/2/2007 10:27:00 PM
Surr: Phenol-d5	41.7	%REC			10-110	10/2/2007 10:27:00 PM
Surr: 2,4,6-Tribromophenol	98.0	%REC			10-123	10/2/2007 10:27:00 PM
Surr: Nitrobenzene-d5	91.4	%REC			35-114	10/2/2007 10:27:00 PM
Surr: 2-Fluorobiphenyl	82.5	%REC			43-116	10/2/2007 10:27:00 PM
Surr: 4-Terphenyl-d14	115	%REC			33-141	10/2/2007 10:27:00 PM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/2/2007 10:27:00 PM

NOTES:

The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.

VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 4:28:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 4:28:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 4:28:00 AM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-09A
Client Sample ID:	LL12 SEEP	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Benzene	ND	µg/L		0.13	1.0	9/29/2007 4:28:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 4:28:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 4:28:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 4:28:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 4:28:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 4:28:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 4:28:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 4:28:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 4:28:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 4:28:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 4:28:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 4:28:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 4:28:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 4:28:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 4:28:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 4:28:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 4:28:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 4:28:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 4:28:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 4:28:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 4:28:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 4:28:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 4:28:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 4:28:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 4:28:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 4:28:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 4:28:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 4:28:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 4:28:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 4:28:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 4:28:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 4:28:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 4:28:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 4:28:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 4:28:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 4:28:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 4:28:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-09A
Client Sample ID:	LL12 SEEP	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 4:28:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 4:28:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 4:28:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 4:28:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 4:28:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 4:28:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 4:28:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 4:28:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 4:28:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 4:28:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 4:28:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 4:28:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 4:28:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 4:28:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 4:28:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 4:28:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 4:28:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 4:28:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 4:28:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 4:28:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 4:28:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 4:28:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 4:28:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 4:28:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 4:28:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 4:28:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 4:28:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 4:28:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 4:28:00 AM
Surr: 1,2-Dichloroethane-d4	91.1	%REC			80-120	9/29/2007 4:28:00 AM
Surr: 4-Bromofluorobenzene	96.3	%REC			86-115	9/29/2007 4:28:00 AM
Surr: Dibromofluoromethane	98.6	%REC			80-120	9/29/2007 4:28:00 AM
Surr: Toluene-d8	101	%REC			88-110	9/29/2007 4:28:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 4:28:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-09A
Client Sample ID:	LL12 SEEP	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	100	CFU/mL		NA	100	9/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.02	mg/L	J	0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	21.8	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	ND	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	2,340	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.57	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	2,880	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	2,000	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	213	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	291	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	9.0	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	9.1	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	4.60	SU		0	NA	9/27/2007 9:31:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-10A
Client Sample ID:	LL13 DAUGHTERY WELL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 6:55:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.383	mg/L		0.0200	0.100	10/8/2007 3:36:00 PM
Calcium	256	mg/L		0.100	0.500	10/3/2007 3:50:00 AM
Iron	0.034	mg/L	J	0.0200	0.100	10/3/2007 3:50:00 AM
Magnesium	165	mg/L		0.400	0.500	10/3/2007 3:50:00 AM
Manganese	11.5	mg/L		0.0010	0.050	10/3/2007 3:50:00 AM
Potassium	7.47	mg/L		0.300	1.00	10/3/2007 3:50:00 AM
Silicon	7.17	mg/L		0.0100	0.100	10/10/2007 8:56:00 PM
Sodium	64.3	mg/L		0.100	0.500	10/3/2007 3:50:00 AM
Zinc	0.259	mg/L		0.0030	0.050	10/3/2007 3:50:00 AM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.485	mg/L		0.0200	0.100	10/8/2007 1:51:00 PM
Calcium	264	mg/L		0.100	0.500	10/3/2007 1:54:00 AM
Iron	0.183	mg/L		0.0200	0.100	10/3/2007 1:54:00 AM
Magnesium	169	mg/L		0.400	0.500	10/3/2007 1:54:00 AM
Manganese	12.0	mg/L		0.0010	0.050	10/3/2007 1:54:00 AM
Potassium	7.76	mg/L		0.300	1.00	10/3/2007 1:54:00 AM
Silicon	7.09	mg/L		0.0100	0.100	10/10/2007 7:14:00 PM
Sodium	66.1	mg/L		0.100	0.500	10/3/2007 1:54:00 AM
Zinc	0.263	mg/L		0.0030	0.050	10/3/2007 1:54:00 AM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 6:30:19 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Barium	0.0387	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Beryllium	0.0004	mg/L	J	0.00020	0.0010	9/27/2007 6:30:19 PM
Cadmium	0.0014	mg/L		0.00020	0.0010	9/27/2007 6:30:19 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	9/27/2007 6:30:19 PM
Cobalt	0.0105	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Copper	0.0055	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Lead	ND	mg/L		0.00020	0.0010	9/27/2007 6:30:19 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Nickel	0.249	mg/L		0.00200	0.0100	9/27/2007 6:30:19 PM
Selenium	ND	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Strontium	2.05	mg/L		0.00100	0.0050	9/27/2007 6:30:19 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 6:30:19 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 6:30:19 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-10A
Client Sample ID:	LL13 DAUGHTERY WELL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 6:55:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS				**E200.8**		Analyst: **DBB**

NOTES:

The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

TOTAL RECOVERABLE METALS BY ICP-MS				**E200.8**		Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	9/27/2007 5:02:33 PM
Arsenic	ND	mg/L		0.00100	0.0050	9/27/2007 5:02:33 PM
Barium	0.0450	mg/L		0.00100	0.0050	9/27/2007 5:02:33 PM
Beryllium	0.0004	mg/L	J	0.00020	0.0010	9/27/2007 5:02:33 PM
Cadmium	0.0015	mg/L		0.00020	0.0010	9/27/2007 5:02:33 PM
Chromium	ND	mg/L		0.00100	0.0050	9/27/2007 5:02:33 PM
Cobalt	0.0135	mg/L		0.00100	0.0050	9/27/2007 5:02:33 PM
Copper	0.0046	mg/L	J	0.00100	0.0050	9/27/2007 5:02:33 PM
Lead	0.0005	mg/L	J	0.00020	0.0010	9/27/2007 5:02:33 PM
Molybdenum	ND	mg/L		0.00100	0.0050	9/27/2007 5:02:33 PM
Nickel	0.284	mg/L		0.00200	0.0100	9/27/2007 5:02:33 PM
Selenium	0.0020	mg/L	J	0.00100	0.0050	9/27/2007 5:02:33 PM
Silver	ND	mg/L		0.00100	0.0050	9/27/2007 5:02:33 PM
Strontium	2.32	mg/L		0.00100	0.0050	9/27/2007 5:02:33 PM
Thallium	ND	mg/L		0.00020	0.0010	9/27/2007 5:02:33 PM
Vanadium	ND	mg/L		0.00100	0.0100	9/27/2007 5:02:33 PM

NOTES:

The CCV for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

The LCS for BE exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, DISSOLVED				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:35:00 AM

MERCURY, TOTAL				**E245.1**		Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	9/27/2007 10:31:00 AM

SEMIVOLATILE ORGANIC COMPOUNDS				**SW8032A**		Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	10/4/2007 4:01:06 PM

SEMI-VOLATILE RANGE ORGANICS				**SW8015B**		Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.045	0.10	10/3/2007 1:35:05 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: LL13 DAUGHTERY WELL
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-10A
DateReceived: 9/25/2007
Collection Date: 9/24/2007 6:55:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.047	0.25	10/3/2007 1:35:05 AM
Surr: o-Terphenyl	103	%REC			30-130	10/3/2007 1:35:05 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	9/28/2007 10:22:10 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00072	0.0107	10/2/2007 9:58:00 PM
Acenaphthylene	ND	mg/L		0.00102	0.0107	10/2/2007 9:58:00 PM
Anthracene	ND	mg/L		0.00133	0.0107	10/2/2007 9:58:00 PM
Benzidine	ND	mg/L		0.00076	0.0107	10/2/2007 9:58:00 PM
Benzo(a)anthracene	ND	mg/L		0.00099	0.0107	10/2/2007 9:58:00 PM
Benzo(a)pyrene	ND	mg/L		0.00128	0.0107	10/2/2007 9:58:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00157	0.0107	10/2/2007 9:58:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00202	0.0107	10/2/2007 9:58:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00136	0.0107	10/2/2007 9:58:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00074	0.0107	10/2/2007 9:58:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00096	0.0107	10/2/2007 9:58:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00098	0.0107	10/2/2007 9:58:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00644	0.0107	10/2/2007 9:58:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00123	0.0107	10/2/2007 9:58:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00339	0.0107	10/2/2007 9:58:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00161	0.0107	10/2/2007 9:58:00 PM
2-Chloronaphthalene	ND	mg/L		0.00104	0.0107	10/2/2007 9:58:00 PM
2-Chlorophenol	ND	mg/L		0.00126	0.0107	10/2/2007 9:58:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00076	0.0107	10/2/2007 9:58:00 PM
Chrysene	ND	mg/L		0.00078	0.0107	10/2/2007 9:58:00 PM
o-Cresol	ND	mg/L		0.00102	0.0107	10/2/2007 9:58:00 PM
m,p-Cresol	ND	mg/L		0.00189	0.0215	10/2/2007 9:58:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00143	0.0107	10/2/2007 9:58:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00322	0.0107	10/2/2007 9:58:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00081	0.0107	10/2/2007 9:58:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00086	0.0107	10/2/2007 9:58:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00090	0.0107	10/2/2007 9:58:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00206	0.0107	10/2/2007 9:58:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00134	0.0107	10/2/2007 9:58:00 PM
Diethyl phthalate	ND	mg/L		0.00250	0.0107	10/2/2007 9:58:00 PM
Dimethyl phthalate	ND	mg/L		0.00273	0.0107	10/2/2007 9:58:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-10A
Client Sample ID:	LL13 DAUGHTERY WELL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 6:55:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00154	0.0107	10/2/2007 9:58:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00240	0.0107	10/2/2007 9:58:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00205	0.0107	10/2/2007 9:58:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00197	0.0107	10/2/2007 9:58:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00201	0.0107	10/2/2007 9:58:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00207	0.0107	10/2/2007 9:58:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00093	0.0107	10/2/2007 9:58:00 PM
Fluoranthene	ND	mg/L		0.00168	0.0107	10/2/2007 9:58:00 PM
Fluorene	ND	mg/L		0.00082	0.0107	10/2/2007 9:58:00 PM
Hexachlorobenzene	ND	mg/L		0.00097	0.0107	10/2/2007 9:58:00 PM
Hexachlorobutadiene	ND	mg/L		0.00123	0.0107	10/2/2007 9:58:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00211	0.0107	10/2/2007 9:58:00 PM
Hexachloroethane	ND	mg/L		0.00101	0.0107	10/2/2007 9:58:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00210	0.0107	10/2/2007 9:58:00 PM
Isophorone	ND	mg/L		0.00088	0.0107	10/2/2007 9:58:00 PM
Naphthalene	ND	mg/L		0.00067	0.0107	10/2/2007 9:58:00 PM
Nitrobenzene	ND	mg/L		0.00119	0.0107	10/2/2007 9:58:00 PM
2-Nitrophenol	ND	mg/L		0.00244	0.0107	10/2/2007 9:58:00 PM
4-Nitrophenol	ND	mg/L		0.00160	0.0107	10/2/2007 9:58:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00142	0.0107	10/2/2007 9:58:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00109	0.0107	10/2/2007 9:58:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00108	0.0107	10/2/2007 9:58:00 PM
Pentachlorophenol	ND	mg/L		0.00210	0.0107	10/2/2007 9:58:00 PM
Phenanthrene	ND	mg/L		0.00093	0.0107	10/2/2007 9:58:00 PM
Phenol	ND	mg/L		0.00102	0.0107	10/2/2007 9:58:00 PM
Pyrene	ND	mg/L		0.00127	0.0107	10/2/2007 9:58:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00104	0.0107	10/2/2007 9:58:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00211	0.0107	10/2/2007 9:58:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00197	0.0107	10/2/2007 9:58:00 PM
Surr: 2-Fluorophenol	56.0	%REC			21-110	10/2/2007 9:58:00 PM
Surr: Phenol-d5	39.1	%REC			10-110	10/2/2007 9:58:00 PM
Surr: 2,4,6-Tribromophenol	90.8	%REC			10-123	10/2/2007 9:58:00 PM
Surr: Nitrobenzene-d5	87.8	%REC			35-114	10/2/2007 9:58:00 PM
Surr: 2-Fluorobiphenyl	79.0	%REC			43-116	10/2/2007 9:58:00 PM
Surr: 4-Terphenyl-d14	117	%REC			33-141	10/2/2007 9:58:00 PM
TIC: Additional Analytes	ND	mg/L		NA	NA	10/2/2007 9:58:00 PM

Key:

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MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-10A
Client Sample ID:	LL13 DAUGHTERY WELL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 6:55:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**

NOTES:
The LCSD for 4-Chloro-3-methylphenol exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impact data usability.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 5:01:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 5:01:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 5:01:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 5:01:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 5:01:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 5:01:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 5:01:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 5:01:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 5:01:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 5:01:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 5:01:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 5:01:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 5:01:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 5:01:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 5:01:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 5:01:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 5:01:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 5:01:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 5:01:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 5:01:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 5:01:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 5:01:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 5:01:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 5:01:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 5:01:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 5:01:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 5:01:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 5:01:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 5:01:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 5:01:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 5:01:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 5:01:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 5:01:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-10A
Client Sample ID:	LL13 DAUGHTERY WELL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 6:55:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 5:01:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 5:01:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 5:01:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 5:01:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 5:01:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 5:01:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 5:01:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 5:01:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 5:01:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 5:01:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 5:01:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 5:01:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 5:01:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 5:01:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 5:01:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 5:01:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 5:01:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 5:01:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 5:01:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 5:01:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 5:01:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 5:01:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 5:01:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 5:01:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 5:01:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 5:01:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 5:01:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 5:01:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 5:01:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 5:01:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 5:01:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 5:01:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 5:01:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 5:01:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 5:01:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 5:01:00 AM
Surr: 1,2-Dichloroethane-d4	90.7	%REC			80-120	9/29/2007 5:01:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-10A
Client Sample ID:	LL13 DAUGHTERY WELL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 6:55:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	95.5	%REC			86-115	9/29/2007 5:01:00 AM
Surr: Dibromofluoromethane	99.6	%REC			80-120	9/29/2007 5:01:00 AM
Surr: Toluene-d8	102	%REC			88-110	9/29/2007 5:01:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	9/29/2007 5:01:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	9/25/2007 5:30:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **DB**
Sulfate Reducing Bacteria	100	CFU/mL		NA	100	9/25/2007 5:20:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	9/27/2007 11:45:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.020	0.10	9/26/2007 12:14:00 AM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	9/26/2007 12:14:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	19.0	mg/L		0.100	1.00	9/26/2007 12:14:00 AM
Fluoride	ND	mg/L		0.060	0.20	9/26/2007 12:14:00 AM
Sulfate	1,940	mg/L		1.00	5.00	9/26/2007 12:14:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	9/27/2007 9:30:00 AM
CONDUCTIVITY			**E120.1**			Analyst: **GV**
Specific Conductance	2,440	µmhos/cm		NA	NA	9/26/2007 7:05:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,710	mg/L		1.0	1	9/26/2007 9:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	19	mg/L		1.0	1	9/26/2007 9:40:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	85.4	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	10.5	mg/L		1.00	1.0	9/27/2007 9:31:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-10A
Client Sample ID:	LL13 DAUGHTERY WELL	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/24/2007 6:55:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	10.5	mg/L		1.00	1.0	9/27/2007 9:31:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	5.39	SU		0	NA	9/27/2007 9:31:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0709F34 **Lab ID** 0709F34-11A
Client Sample ID:	TRIP BLANK	**DateReceived:**	9/25/2007
Project:	CS STUDY	**Collection Date:**	9/25/2007
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	9/29/2007 9:57:00 AM
Acrolein	ND	µg/L		4.36	10.0	9/29/2007 9:57:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	9/29/2007 9:57:00 AM
Benzene	ND	µg/L		0.13	1.0	9/29/2007 9:57:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	9/29/2007 9:57:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	9/29/2007 9:57:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	9/29/2007 9:57:00 AM
Bromoform	ND	µg/L		0.40	1.0	9/29/2007 9:57:00 AM
Bromomethane	ND	µg/L		0.50	1.0	9/29/2007 9:57:00 AM
2-Butanone	ND	µg/L		4.68	10.0	9/29/2007 9:57:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	9/29/2007 9:57:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	9/29/2007 9:57:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	9/29/2007 9:57:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	9/29/2007 9:57:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	9/29/2007 9:57:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	9/29/2007 9:57:00 AM
Chloroethane	ND	µg/L		0.94	1.0	9/29/2007 9:57:00 AM
Chloroform	ND	µg/L		0.25	1.0	9/29/2007 9:57:00 AM
Chloromethane	ND	µg/L		0.33	1.0	9/29/2007 9:57:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	9/29/2007 9:57:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	9/29/2007 9:57:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	9/29/2007 9:57:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	9/29/2007 9:57:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	9/29/2007 9:57:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	9/29/2007 9:57:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	9/29/2007 9:57:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	9/29/2007 9:57:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	9/29/2007 9:57:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	9/29/2007 9:57:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	9/29/2007 9:57:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	9/29/2007 9:57:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	9/29/2007 9:57:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	9/29/2007 9:57:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	9/29/2007 9:57:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	9/29/2007 9:57:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	9/29/2007 9:57:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	9/29/2007 9:57:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: TRIP BLANK
Project: CS STUDY
Site ID:

WorkOrder: 0709F34 **Lab ID** 0709F34-11A
DateReceived: 9/25/2007
Collection Date: 9/25/2007
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	9/29/2007 9:57:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 9:57:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	9/29/2007 9:57:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	9/29/2007 9:57:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	9/29/2007 9:57:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	9/29/2007 9:57:00 AM
Iodomethane	ND	µg/L		3.44	10.0	9/29/2007 9:57:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	9/29/2007 9:57:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	9/29/2007 9:57:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	9/29/2007 9:57:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	9/29/2007 9:57:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	9/29/2007 9:57:00 AM
Naphthalene	ND	µg/L		0.42	1.0	9/29/2007 9:57:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	9/29/2007 9:57:00 AM
Styrene	ND	µg/L		0.24	1.0	9/29/2007 9:57:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	9/29/2007 9:57:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	9/29/2007 9:57:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	9/29/2007 9:57:00 AM
Toluene	ND	µg/L		0.17	1.0	9/29/2007 9:57:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 9:57:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	9/29/2007 9:57:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	9/29/2007 9:57:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	9/29/2007 9:57:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	9/29/2007 9:57:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	9/29/2007 9:57:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	9/29/2007 9:57:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 9:57:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	9/29/2007 9:57:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	9/29/2007 9:57:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	9/29/2007 9:57:00 AM
o-Xylene	ND	µg/L		0.19	1.0	9/29/2007 9:57:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	9/29/2007 9:57:00 AM
Surr: 1,2-Dichloroethane-d4	87.7	%REC			80-120	9/29/2007 9:57:00 AM
Surr: 4-Bromofluorobenzene	93.6	%REC			86-115	9/29/2007 9:57:00 AM
Surr: Dibromofluoromethane	101	%REC			80-120	9/29/2007 9:57:00 AM
Surr: Toluene-d8	100	%REC			88-110	9/29/2007 9:57:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

Appendix II-P-3

Panther, LLC

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

February 08, 2008

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: PL SLURRY

Order No.: 0801C90

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 8 sample(s) on 1/24/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason A. Clark

Jason Clark
Project Manager

Accredited in accordance with nelac

REIC

Improving the environment, one client at a time...

Report Narrative

WO#: **0801C90**

Date: **2/8/2008**

CLIENT: WV DEP - CHARLESTON

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

THE TPH (DIESEL RANGE) SILICA GEL TREATMENT RESULTS ARE AS FOLLOWS:

0801C90-01A = ND

0801C90-01S = 118 MG/KG

0801C90-02A = ND

0801C90-03A = 0.96 MG/L

0801C90-04A = ND

0801C90-05A = ND

0801C90-06A = ND

0801C90-07A = ND

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.029	mg/L	J	0.0200	0.100	2/5/2008 1:17:00 PM
Calcium	2.83	mg/L		0.100	0.500	2/5/2008 1:17:00 PM
Iron	0.068	mg/L	J	0.0200	0.100	2/5/2008 1:17:00 PM
Magnesium	0.591	mg/L		0.400	0.500	2/5/2008 1:17:00 PM
Manganese	0.021	mg/L	J	0.0010	0.050	2/5/2008 1:17:00 PM
Potassium	5.38	mg/L		0.300	1.00	2/5/2008 1:17:00 PM
Silicon	0.346	mg/L		0.0100	0.100	2/7/2008 3:28:00 PM
Sodium	266	mg/L		0.100	0.500	2/5/2008 1:17:00 PM
Zinc	0.019	mg/L	J	0.0030	0.050	2/5/2008 1:17:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.046	mg/L	J	0.0200	0.100	2/5/2008 1:05:00 PM
Calcium	3.51	mg/L		0.100	0.500	2/5/2008 1:05:00 PM
Iron	0.089	mg/L	J	0.0200	0.100	2/5/2008 1:05:00 PM
Magnesium	0.771	mg/L		0.400	0.500	2/5/2008 1:05:00 PM
Manganese	0.028	mg/L	J	0.0010	0.050	2/5/2008 1:05:00 PM
Potassium	7.05	mg/L		0.300	1.00	2/5/2008 1:05:00 PM
Silicon	0.358	mg/L		0.0100	0.100	2/7/2008 3:17:00 PM
Sodium	341	mg/L		0.100	0.500	2/5/2008 1:05:00 PM
Zinc	0.014	mg/L	J	0.0030	0.050	2/5/2008 1:05:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0146	mg/L		0.00100	0.0050	2/4/2008 12:23:04 PM
Arsenic	0.0104	mg/L	J	0.00500	0.0250	2/4/2008 12:23:04 PM
Barium	0.243	mg/L		0.00500	0.0250	2/4/2008 12:23:04 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 12:23:04 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 12:23:04 PM
Chromium	0.0272	mg/L		0.00500	0.0250	2/4/2008 12:23:04 PM
Cobalt	0.0142	mg/L	J	0.00500	0.0250	2/4/2008 12:23:04 PM
Copper	0.0248	mg/L	J	0.00500	0.0250	2/4/2008 12:23:04 PM
Lead	0.0762	mg/L		0.00100	0.0050	2/4/2008 12:23:04 PM
Molybdenum	0.198	mg/L		0.00500	0.0250	2/4/2008 12:23:04 PM
Nickel	0.0386	mg/L	J	0.0100	0.0500	2/4/2008 12:23:04 PM
Selenium	0.0224	mg/L	J	0.00500	0.0250	2/4/2008 12:23:04 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 12:23:04 PM
Strontium	0.571	mg/L		0.00500	0.0250	2/4/2008 12:23:04 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 12:23:04 PM
Vanadium	0.0103	mg/L	J	0.00500	0.0500	2/4/2008 12:23:04 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
NOTES: The reporting limits elevated due to matrix complexity/interference.						
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0160	mg/L		0.00100	0.0050	2/4/2008 12:17:20 PM
Arsenic	0.0113	mg/L	J	0.00500	0.0250	2/4/2008 12:17:20 PM
Barium	0.269	mg/L		0.00500	0.0250	2/4/2008 12:17:20 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 12:17:20 PM
Cadmium	0.0011	mg/L	J	0.00100	0.0050	2/4/2008 12:17:20 PM
Chromium	0.0342	mg/L		0.00500	0.0250	2/4/2008 12:17:20 PM
Cobalt	0.0161	mg/L	J	0.00500	0.0250	2/4/2008 12:17:20 PM
Copper	0.0278	mg/L		0.00500	0.0250	2/4/2008 12:17:20 PM
Lead	0.0775	mg/L		0.00100	0.0050	2/4/2008 12:17:20 PM
Molybdenum	0.217	mg/L		0.00500	0.0250	2/4/2008 12:17:20 PM
Nickel	0.0432	mg/L	J	0.0100	0.0500	2/4/2008 12:17:20 PM
Selenium	0.0255	mg/L		0.00500	0.0050	2/4/2008 12:17:20 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 12:17:20 PM
Strontium	0.632	mg/L		0.00500	0.0250	2/4/2008 12:17:20 PM
Thallium	ND	mg/L		0.00020	0.0010	2/4/2008 12:17:20 PM
Vanadium	0.0131	mg/L	J	0.00500	0.0500	2/4/2008 12:17:20 PM
NOTES: The reporting limits elevated due to matrix complexity/interference.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:01:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:00:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	2/1/2008 5:45:37 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	0.51	mg/L		0.100	0.23	1/31/2008 11:30:40 PM
TPH (Oil Range)	ND	mg/L		0.104	0.57	1/31/2008 11:30:40 PM
Surr: o-Terphenyl	82.2	%REC			30-130	1/31/2008 11:30:40 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	2/1/2008

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00169	0.0254	1/30/2008 1:25:00 PM
Acenaphthylene	ND	mg/L		0.00242	0.0254	1/30/2008 1:25:00 PM
Anthracene	ND	mg/L		0.00315	0.0254	1/30/2008 1:25:00 PM
Benzidine	ND	mg/L		0.00181	0.0254	1/30/2008 1:25:00 PM
Benzo(a)anthracene	ND	mg/L		0.00233	0.0254	1/30/2008 1:25:00 PM
Benzo(a)pyrene	ND	mg/L		0.00302	0.0254	1/30/2008 1:25:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00371	0.0254	1/30/2008 1:25:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00479	0.0254	1/30/2008 1:25:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00322	0.0254	1/30/2008 1:25:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00175	0.0254	1/30/2008 1:25:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00228	0.0254	1/30/2008 1:25:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00231	0.0254	1/30/2008 1:25:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.0152	0.0254	1/30/2008 1:25:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00291	0.0254	1/30/2008 1:25:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00802	0.0254	1/30/2008 1:25:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00381	0.0254	1/30/2008 1:25:00 PM
2-Chloronaphthalene	ND	mg/L		0.00247	0.0254	1/30/2008 1:25:00 PM
2-Chlorophenol	ND	mg/L		0.00298	0.0254	1/30/2008 1:25:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00181	0.0254	1/30/2008 1:25:00 PM
Chrysene	ND	mg/L		0.00184	0.0254	1/30/2008 1:25:00 PM
o-Cresol	ND	mg/L		0.00243	0.0254	1/30/2008 1:25:00 PM
m,p-Cresol	ND	mg/L		0.00449	0.0508	1/30/2008 1:25:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00339	0.0254	1/30/2008 1:25:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00762	0.0254	1/30/2008 1:25:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00192	0.0254	1/30/2008 1:25:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00204	0.0254	1/30/2008 1:25:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00213	0.0254	1/30/2008 1:25:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00488	0.0254	1/30/2008 1:25:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00316	0.0254	1/30/2008 1:25:00 PM
Diethyl phthalate	ND	mg/L		0.00592	0.0254	1/30/2008 1:25:00 PM
Dimethyl phthalate	ND	mg/L		0.00647	0.0254	1/30/2008 1:25:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00365	0.0254	1/30/2008 1:25:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00568	0.0254	1/30/2008 1:25:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00486	0.0254	1/30/2008 1:25:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00467	0.0254	1/30/2008 1:25:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00475	0.0254	1/30/2008 1:25:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00490	0.0254	1/30/2008 1:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/L		0.00220	0.0254	1/30/2008 1:25:00 PM
Fluoranthene	ND	mg/L		0.00398	0.0254	1/30/2008 1:25:00 PM
Fluorene	ND	mg/L		0.00194	0.0254	1/30/2008 1:25:00 PM
Hexachlorobenzene	ND	mg/L		0.00230	0.0254	1/30/2008 1:25:00 PM
Hexachlorobutadiene	ND	mg/L		0.00292	0.0254	1/30/2008 1:25:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00499	0.0254	1/30/2008 1:25:00 PM
Hexachloroethane	ND	mg/L		0.00240	0.0254	1/30/2008 1:25:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00497	0.0254	1/30/2008 1:25:00 PM
Isophorone	ND	mg/L		0.00208	0.0254	1/30/2008 1:25:00 PM
Naphthalene	ND	mg/L		0.00158	0.0254	1/30/2008 1:25:00 PM
Nitrobenzene	ND	mg/L		0.00283	0.0254	1/30/2008 1:25:00 PM
2-Nitrophenol	ND	mg/L		0.00579	0.0254	1/30/2008 1:25:00 PM
4-Nitrophenol	ND	mg/L		0.00378	0.0254	1/30/2008 1:25:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00336	0.0254	1/30/2008 1:25:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00259	0.0254	1/30/2008 1:25:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00255	0.0254	1/30/2008 1:25:00 PM
Pentachlorophenol	ND	mg/L		0.00497	0.0254	1/30/2008 1:25:00 PM
Phenanthrene	ND	mg/L		0.00221	0.0254	1/30/2008 1:25:00 PM
Phenol	ND	mg/L		0.00242	0.0254	1/30/2008 1:25:00 PM
Pyrene	ND	mg/L		0.00301	0.0254	1/30/2008 1:25:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00247	0.0254	1/30/2008 1:25:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00499	0.0254	1/30/2008 1:25:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00467	0.0254	1/30/2008 1:25:00 PM
Surr: 2-Fluorophenol	66.5	%REC			21-110	1/30/2008 1:25:00 PM
Surr: Phenol-d5	56.4	%REC			10-110	1/30/2008 1:25:00 PM
Surr: 2,4,6-Tribromophenol	101	%REC			10-123	1/30/2008 1:25:00 PM
Surr: Nitrobenzene-d5	91.3	%REC			35-114	1/30/2008 1:25:00 PM
Surr: 2-Fluorobiphenyl	80.5	%REC			43-116	1/30/2008 1:25:00 PM
Surr: 4-Terphenyl-d14	89.2	%REC			33-141	1/30/2008 1:25:00 PM
TIC: 2,5-dimethoxy-2,4-hexadiene	0.0152	mg/L		NA	NA	1/30/2008 1:25:00 PM
TIC: 2-Propanol, 1-2-methoxy-1-methylethyl)-	0.0304	mg/L		NA	NA	1/30/2008 1:25:00 PM
TIC: Dipropyleneglycol methyl este	0.0348	mg/L		NA	NA	1/30/2008 1:25:00 PM
TIC: Hexanoic acid, 2-ethyl-	0.280	mg/L		NA	NA	1/30/2008 1:25:00 PM
TIC: Octanoic acid, 2-methyl-, methyl ester	0.0311	mg/L		NA	NA	1/30/2008 1:25:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	16.7	µg/L	J	4.88	20.0	1/29/2008 10:25:00 AM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 10:25:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 10:25:00 AM
Benzene	1.8	µg/L		0.13	1.0	1/29/2008 10:25:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 10:25:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 10:25:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 10:25:00 AM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 10:25:00 AM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 10:25:00 AM
2-Butanone	68.4	µg/L		4.68	10.0	1/29/2008 10:25:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 10:25:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 10:25:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 10:25:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 10:25:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 10:25:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 10:25:00 AM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 10:25:00 AM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 10:25:00 AM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 10:25:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 10:25:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 10:25:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 10:25:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 10:25:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 10:25:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 10:25:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 10:25:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 10:25:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 10:25:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 10:25:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 10:25:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 10:25:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 10:25:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 10:25:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 10:25:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 10:25:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 10:25:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 10:25:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 10:25:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 10:25:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 10:25:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 10:25:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 10:25:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 10:25:00 AM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 10:25:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 10:25:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 10:25:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 10:25:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 10:25:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 10:25:00 AM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 10:25:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 10:25:00 AM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 10:25:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 10:25:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 10:25:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 10:25:00 AM
Toluene	2.8	µg/L		0.17	1.0	1/29/2008 10:25:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 10:25:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 10:25:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 10:25:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 10:25:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 10:25:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 10:25:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 10:25:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 10:25:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 10:25:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 10:25:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 10:25:00 AM
o-Xylene	0.6	µg/L	J	0.19	1.0	1/29/2008 10:25:00 AM
m,p-Xylene	0.8	µg/L	J	0.29	2.0	1/29/2008 10:25:00 AM
Surr: 1,2-Dichloroethane-d4	105	%REC			80-120	1/29/2008 10:25:00 AM
Surr: 4-Bromofluorobenzene	107	%REC			86-115	1/29/2008 10:25:00 AM
Surr: Dibromofluoromethane	108	%REC			80-120	1/29/2008 10:25:00 AM
Surr: Toluene-d8	107	%REC			88-110	1/29/2008 10:25:00 AM
TIC: 1-butanol	3.4	µg/L		NA	NA	1/29/2008 10:25:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
TIC: 2-methyl 2-propane	5.4	µg/L		NA	NA	1/29/2008 10:25:00 AM
TIC: 2-methyl butane	1.2	µg/L		NA	NA	1/29/2008 10:25:00 AM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	1/28/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.59	mg/L		0.020	0.10	1/24/2008 5:19:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	1/24/2008 5:19:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	423	mg/L		0.100	1.00	1/24/2008 5:19:00 PM
Fluoride	1.53	mg/L		0.060	0.20	1/24/2008 5:19:00 PM
Sulfate	261	mg/L		1.00	5.00	1/24/2008 5:19:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	1.96	mg/L		0.020	0.10	1/29/2008 8:50:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	5,000	µmhos/cm		NA	NA	1/29/2008 6:50:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	2,540	mg/L		1.0	1	1/29/2008 8:45:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	74	mg/L		1.0	1	1/29/2008 8:55:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	412	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	7.1	mg/L		1.00	1.0	1/28/2008 9:48:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY LIQUIDS	**Lab ID:**	0801C90-01A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	420	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	8.26	SU		NA	NA	1/28/2008 9:48:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY SOLIDS	**Lab ID:**	0801C90-01S
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010B**			Analyst: **JD**
Aluminum	3,600	mg/Kg		2.00	25.0	1/29/2008 2:47:00 PM
Antimony	ND	mg/Kg		1.50	5.00	1/29/2008 2:43:00 PM
Arsenic	ND	mg/Kg		1.50	5.00	1/29/2008 2:43:00 PM
Barium	52.3	mg/Kg		0.100	2.50	1/29/2008 2:43:00 PM
Beryllium	0.385	mg/Kg		0.0200	0.250	1/29/2008 2:43:00 PM
Cadmium	0.0809	mg/Kg	J	0.0500	0.500	1/29/2008 2:43:00 PM
Calcium	1,220	mg/Kg		2.50	25.0	1/29/2008 2:43:00 PM
Chromium	4.82	mg/Kg		0.100	2.50	1/29/2008 2:43:00 PM
Cobalt	2.31	mg/Kg	J	0.100	2.50	1/29/2008 2:43:00 PM
Copper	7.54	mg/Kg		0.200	2.50	1/29/2008 2:43:00 PM
Iron	6,080	mg/Kg		5.00	25.0	1/29/2008 2:47:00 PM
Lead	4.79	mg/Kg	J	0.500	5.00	1/29/2008 2:43:00 PM
Magnesium	908	mg/Kg		2.50	12.0	1/29/2008 2:43:00 PM
Manganese	51.9	mg/Kg		0.0500	2.50	1/29/2008 2:43:00 PM
Molybdenum	ND	mg/Kg		0.200	2.50	1/29/2008 2:43:00 PM
Nickel	5.06	mg/Kg		0.200	2.50	1/29/2008 2:43:00 PM
Potassium	1,210	mg/Kg		10.0	25.0	1/30/2008 1:20:00 PM
Selenium	ND	mg/Kg		0.500	5.00	1/29/2008 2:43:00 PM
Silicon	46.3	mg/Kg		0.500	2.50	1/29/2008 2:36:00 PM
Silver	ND	mg/Kg		0.100	2.50	1/29/2008 2:43:00 PM
Sodium	754	mg/Kg		2.50	25.0	1/29/2008 2:43:00 PM
Strontium	13.6	mg/Kg		0.100	2.50	1/29/2008 2:36:00 PM
Thallium	ND	mg/Kg		0.500	5.00	1/29/2008 2:43:00 PM
Vanadium	6.61	mg/Kg		0.200	2.50	1/29/2008 2:43:00 PM
Zinc	17.4	mg/Kg		0.200	2.50	1/29/2008 2:43:00 PM
MERCURY, TOTAL			**SW7471A**			Analyst: **AB**
Mercury	ND	mg/Kg		0.0200	0.100	1/30/2008 8:27:00 AM
PERCENT MOISTURE			**SM2540 B**			Analyst: **FF**
Percent Moisture	59	wt%		0.01	0.5	1/28/2008
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	144	mg/Kg		2.39	3.97	1/29/2008 9:19:29 PM
TPH (Oil Range)	159	mg/Kg		1.03	9.92	1/29/2008 9:19:29 PM
Surr: o-Terphenyl	86.6	%REC			30-130	1/29/2008 9:19:29 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **JC**
Ethylene Glycol	ND	mg/Kg		500	500	2/5/2008

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY SOLIDS	**Lab ID:**	0801C90-01S
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/Kg		0.0191	0.333	2/1/2008 5:20:00 PM
Acenaphthylene	ND	mg/Kg		0.0260	0.333	2/1/2008 5:20:00 PM
Anthracene	ND	mg/Kg		0.0222	0.333	2/1/2008 5:20:00 PM
Benzidine	ND	mg/Kg		0.0036	0.333	2/1/2008 5:20:00 PM
Benzo(a)anthracene	0.036	mg/Kg	J	0.0240	0.333	2/1/2008 5:20:00 PM
Benzo(a)pyrene	0.070	mg/Kg	J	0.0307	0.333	2/1/2008 5:20:00 PM
Benzo(b)fluoranthene	0.082	mg/Kg	J	0.0315	0.333	2/1/2008 5:20:00 PM
Benzo(g,h,i)perylene	0.155	mg/Kg	J	0.0294	0.333	2/1/2008 5:20:00 PM
Benzo(k)fluoranthene	ND	mg/Kg		0.0395	0.333	2/1/2008 5:20:00 PM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.0253	0.333	2/1/2008 5:20:00 PM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.0303	0.333	2/1/2008 5:20:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.0312	0.333	2/1/2008 5:20:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/Kg		0.200	0.333	2/1/2008 5:20:00 PM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.0272	0.333	2/1/2008 5:20:00 PM
Butyl benzyl phthalate	ND	mg/Kg		0.0403	0.333	2/1/2008 5:20:00 PM
4-Chloro-3-methylphenol	ND	mg/Kg		0.0252	0.333	2/1/2008 5:20:00 PM
2-Chloronaphthalene	ND	mg/Kg		0.0243	0.333	2/1/2008 5:20:00 PM
2-Chlorophenol	ND	mg/Kg		0.0267	0.333	2/1/2008 5:20:00 PM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.0228	0.333	2/1/2008 5:20:00 PM
Chrysene	0.206	mg/Kg	J	0.0190	0.333	2/1/2008 5:20:00 PM
o-Cresol	ND	mg/Kg		0.0258	0.333	2/1/2008 5:20:00 PM
m,p-Cresol	0.089	mg/Kg	J	0.0582	0.666	2/1/2008 5:20:00 PM
Dibenzo(a,h)anthracene	0.032	mg/Kg	J	0.0290	0.333	2/1/2008 5:20:00 PM
Di-n-butyl phthalate	ND	mg/Kg		0.0999	0.333	2/1/2008 5:20:00 PM
1,2-Dichlorobenzene	ND	mg/Kg		0.0288	0.333	2/1/2008 5:20:00 PM
1,3-Dichlorobenzene	ND	mg/Kg		0.0381	0.333	2/1/2008 5:20:00 PM
1,4-Dichlorobenzene	ND	mg/Kg		0.0335	0.333	2/1/2008 5:20:00 PM
3,3´-Dichlorobenzidine	ND	mg/Kg		0.0239	0.333	2/1/2008 5:20:00 PM
2,4-Dichlorophenol	ND	mg/Kg		0.0223	0.333	2/1/2008 5:20:00 PM
Diethyl phthalate	ND	mg/Kg		0.0214	0.333	2/1/2008 5:20:00 PM
Dimethyl phthalate	ND	mg/Kg		0.0249	0.333	2/1/2008 5:20:00 PM
2,4-Dimethylphenol	0.167	mg/Kg	J	0.0301	0.333	2/1/2008 5:20:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.0226	0.333	2/1/2008 5:20:00 PM
2,4-Dinitrophenol	ND	mg/Kg		0.0391	0.333	2/1/2008 5:20:00 PM
2,4-Dinitrotoluene	ND	mg/Kg		0.0220	0.333	2/1/2008 5:20:00 PM
2,6-Dinitrotoluene	ND	mg/Kg		0.0302	0.333	2/1/2008 5:20:00 PM
Di-n-octyl phthalate	ND	mg/Kg		0.0466	0.333	2/1/2008 5:20:00 PM

Key:

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY SOLIDS	**Lab ID:**	0801C90-01S
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/Kg		0.0226	0.333	2/1/2008 5:20:00 PM
Fluoranthene	0.070	mg/Kg	J	0.0278	0.333	2/1/2008 5:20:00 PM
Fluorene	0.202	mg/Kg	J	0.0208	0.333	2/1/2008 5:20:00 PM
Hexachlorobenzene	ND	mg/Kg		0.0223	0.333	2/1/2008 5:20:00 PM
Hexachlorobutadiene	ND	mg/Kg		0.0339	0.333	2/1/2008 5:20:00 PM
Hexachlorocyclopentadiene	ND	mg/Kg		0.0249	0.333	2/1/2008 5:20:00 PM
Hexachloroethane	ND	mg/Kg		0.0353	0.333	2/1/2008 5:20:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/Kg		0.0317	0.333	2/1/2008 5:20:00 PM
Isophorone	ND	mg/Kg		0.0236	0.333	2/1/2008 5:20:00 PM
Naphthalene	1.50	mg/Kg		0.0258	0.333	2/1/2008 5:20:00 PM
Nitrobenzene	ND	mg/Kg		0.0342	0.333	2/1/2008 5:20:00 PM
2-Nitrophenol	ND	mg/Kg		0.0309	0.333	2/1/2008 5:20:00 PM
4-Nitrophenol	ND	mg/Kg		0.0253	0.333	2/1/2008 5:20:00 PM
N-Nitrosodimethylamine	ND	mg/Kg		0.0318	0.333	2/1/2008 5:20:00 PM
N-Nitrosodiphenylamine	ND	mg/Kg		0.0229	0.333	2/1/2008 5:20:00 PM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.0301	0.333	2/1/2008 5:20:00 PM
Pentachlorophenol	ND	mg/Kg		0.0292	0.333	2/1/2008 5:20:00 PM
Phenanthrene	0.903	mg/Kg		0.0194	0.333	2/1/2008 5:20:00 PM
Phenol	0.045	mg/Kg	J	0.0213	0.333	2/1/2008 5:20:00 PM
Pyrene	0.095	mg/Kg	J	0.0246	0.333	2/1/2008 5:20:00 PM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.0264	0.333	2/1/2008 5:20:00 PM
2,4,5-Trichlorophenol	ND	mg/Kg		0.0289	0.333	2/1/2008 5:20:00 PM
2,4,6-Trichlorophenol	ND	mg/Kg		0.0238	0.333	2/1/2008 5:20:00 PM
Surr: 2-Fluorophenol	73.8	%REC			29.1-120	2/1/2008 5:20:00 PM
Surr: Phenol-d5	76.7	%REC			36.1-163	2/1/2008 5:20:00 PM
Surr: 2,4,6-Tribromophenol	94.9	%REC			35.1-151	2/1/2008 5:20:00 PM
Surr: Nitrobenzene-d5	94.3	%REC			41.1-132	2/1/2008 5:20:00 PM
Surr: 2-Fluorobiphenyl	84.0	%REC			32.9-121	2/1/2008 5:20:00 PM
Surr: 4-Terphenyl-d14	91.3	%REC			50.9-145	2/1/2008 5:20:00 PM
TIC: Butane, 1,1-dibutoxy	1.07	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Butanioc acid, butyl ester	1.32	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Hexadecane	0.683	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Naphthalene, 1,3-dimethyl	1.28	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Naphthalene, 1,4-dimethyl	1.08	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Naphthalene, 1-methyl	1.09	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Pentadecane, 2,6,10,14-tetramethyl-	1.34	mg/Kg		NA	NA	2/1/2008 5:20:00 PM

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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY SOLIDS	**Lab ID:**	0801C90-01S
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Propanoic acid, 2-methyl-, 2-ethyl-	1.05	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Tetradecane	0.886	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
TIC: Tridecane	1.01	mg/Kg		NA	NA	2/1/2008 5:20:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/Kg		122	500	2/4/2008 4:29:00 PM
Acrolein	ND	µg/Kg		109	250	2/4/2008 4:29:00 PM
Acrylonitrile	ND	µg/Kg		106	250	2/4/2008 4:29:00 PM
Carbon disulfide	ND	µg/Kg		31.8	125	2/4/2008 4:29:00 PM
Iodomethane	ND	µg/Kg		85.9	250	2/4/2008 4:29:00 PM
Methyl tert-butyl ether	ND	µg/Kg		18.9	125	2/4/2008 4:29:00 PM
Vinyl acetate	ND	µg/Kg		122	250	2/4/2008 4:29:00 PM
Benzene	166	µg/Kg		3.22	25.0	2/4/2008 4:29:00 PM
Bromobenzene	ND	µg/Kg		6.15	25.0	2/4/2008 4:29:00 PM
Bromochloromethane	ND	µg/Kg		8.65	25.0	2/4/2008 4:29:00 PM
Bromodichloromethane	ND	µg/Kg		4.05	25.0	2/4/2008 4:29:00 PM
Bromoform	ND	µg/Kg		10.0	25.0	2/4/2008 4:29:00 PM
2-Butanone	ND	µg/Kg		117	250	2/4/2008 4:29:00 PM
Bromomethane	ND	µg/Kg		12.4	25.0	2/4/2008 4:29:00 PM
n-Butylbenzene	ND	µg/Kg		6.30	25.0	2/4/2008 4:29:00 PM
sec-Butylbenzene	8.5	µg/Kg	J	6.88	25.0	2/4/2008 4:29:00 PM
tert-Butylbenzene	ND	µg/Kg		5.90	25.0	2/4/2008 4:29:00 PM
Carbon tetrachloride	ND	µg/Kg		6.25	25.0	2/4/2008 4:29:00 PM
Chlorobenzene	ND	µg/Kg		4.42	25.0	2/4/2008 4:29:00 PM
Chloroethane	ND	µg/Kg		23.6	25.0	2/4/2008 4:29:00 PM
Chloroform	ND	µg/Kg		6.32	25.0	2/4/2008 4:29:00 PM
Chloromethane	ND	µg/Kg		8.18	25.0	2/4/2008 4:29:00 PM
2-Chlorotoluene	ND	µg/Kg		6.35	25.0	2/4/2008 4:29:00 PM
4-Chlorotoluene	ND	µg/Kg		7.02	25.0	2/4/2008 4:29:00 PM
Dibromochloromethane	ND	µg/Kg		10.5	25.0	2/4/2008 4:29:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		12.5	150	2/4/2008 4:29:00 PM
1,2-Dibromoethane	ND	µg/Kg		8.52	25.0	2/4/2008 4:29:00 PM
Dibromomethane	ND	µg/Kg		7.33	25.0	2/4/2008 4:29:00 PM
1,2-Dichlorobenzene	ND	µg/Kg		11.2	25.0	2/4/2008 4:29:00 PM
1,3-Dichlorobenzene	ND	µg/Kg		3.40	25.0	2/4/2008 4:29:00 PM
1,4-Dichlorobenzene	ND	µg/Kg		7.18	25.0	2/4/2008 4:29:00 PM
Dichlorodifluoromethane	ND	µg/Kg		17.9	25.0	2/4/2008 4:29:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY SOLIDS	**Lab ID:**	0801C90-01S
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloroethane	ND	µg/Kg		9.58	25.0	2/4/2008 4:29:00 PM
1,2-Dichloroethane	ND	µg/Kg		10.7	25.0	2/4/2008 4:29:00 PM
1,1-Dichloroethene	ND	µg/Kg		8.20	25.0	2/4/2008 4:29:00 PM
cis-1,2-Dichloroethene	ND	µg/Kg		5.65	25.0	2/4/2008 4:29:00 PM
trans-1,2-Dichloroethene	ND	µg/Kg		9.80	25.0	2/4/2008 4:29:00 PM
1,2-Dichloropropane	ND	µg/Kg		11.5	25.0	2/4/2008 4:29:00 PM
1,3-Dichloropropane	ND	µg/Kg		17.6	25.0	2/4/2008 4:29:00 PM
2,2-Dichloropropane	ND	µg/Kg		5.72	25.0	2/4/2008 4:29:00 PM
1,1-Dichloropropene	ND	µg/Kg		8.35	25.0	2/4/2008 4:29:00 PM
cis-1,3-Dichloropropene	ND	µg/Kg		5.50	25.0	2/4/2008 4:29:00 PM
trans-1,3-Dichloropropene	ND	µg/Kg		5.40	25.0	2/4/2008 4:29:00 PM
Ethylbenzene	122	µg/Kg		4.45	25.0	2/4/2008 4:29:00 PM
2-Hexanone	ND	µg/Kg		103	250	2/4/2008 4:29:00 PM
Hexachlorobutadiene	ND	µg/Kg		6.40	25.0	2/4/2008 4:29:00 PM
Isopropylbenzene	30.2	µg/Kg		5.75	25.0	2/4/2008 4:29:00 PM
4-Isopropyltoluene	ND	µg/Kg		5.90	25.0	2/4/2008 4:29:00 PM
4-Methyl-2-pentanone	ND	µg/Kg		110	250	2/4/2008 4:29:00 PM
Methylene chloride	ND	µg/Kg		13.5	25.0	2/4/2008 4:29:00 PM
Naphthalene	259	µg/Kg		10.4	25.0	2/4/2008 4:29:00 PM
n-Propylbenzene	45.5	µg/Kg		3.42	25.0	2/4/2008 4:29:00 PM
Styrene	ND	µg/Kg		6.00	25.0	2/4/2008 4:29:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		9.00	25.0	2/4/2008 4:29:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		9.60	25.0	2/4/2008 4:29:00 PM
Tetrachloroethene	ND	µg/Kg		4.90	25.0	2/4/2008 4:29:00 PM
Toluene	1,040	µg/Kg		16.7	100	2/5/2008 10:37:00 AM
1,2,3-Trichlorobenzene	ND	µg/Kg		10.2	25.0	2/4/2008 4:29:00 PM
1,2,4-Trichlorobenzene	ND	µg/Kg		10.2	25.0	2/4/2008 4:29:00 PM
1,1,1-Trichloroethane	ND	µg/Kg		8.85	25.0	2/4/2008 4:29:00 PM
1,1,2-Trichloroethane	ND	µg/Kg		12.3	25.0	2/4/2008 4:29:00 PM
Trichloroethene	ND	µg/Kg		7.55	25.0	2/4/2008 4:29:00 PM
Trichlorofluoromethane	ND	µg/Kg		7.48	25.0	2/4/2008 4:29:00 PM
1,2,3-Trichloropropane	ND	µg/Kg		8.95	25.0	2/4/2008 4:29:00 PM
1,2,4-Trimethylbenzene	216	µg/Kg		6.88	25.0	2/4/2008 4:29:00 PM
1,3,5-Trimethylbenzene	76.8	µg/Kg		6.88	25.0	2/4/2008 4:29:00 PM
Vinyl chloride	ND	µg/Kg		5.58	25.0	2/4/2008 4:29:00 PM
o-Xylene	284	µg/Kg		4.65	25.0	2/4/2008 4:29:00 PM
m,p-Xylene	585	µg/Kg		7.18	50.0	2/4/2008 4:29:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-SLURRY SOLIDS	**Lab ID:**	0801C90-01S
Project:	PL SLURRY	**Collection Date:**	1/23/2008 9:45:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 1,2-Dichloroethane-d4	87.8	%REC			72-120	2/4/2008 4:29:00 PM
Surr: 4-Bromofluorobenzene	112	%REC			74-121	2/4/2008 4:29:00 PM
Surr: Dibromofluoromethane	93.4	%REC			75-120	2/4/2008 4:29:00 PM
Surr: Toluene-d8	104	%REC			81-117	2/4/2008 4:29:00 PM
TIC: 2-ethyl hexanal	433	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: 2-methyl butane	107	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: 2-methyl pentane	133	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: butane	135	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: Cyclohexane	333	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: hexane	73.5	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: isobutane	94.8	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: methyl cyclohexane	580	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: methyl cyclopentane	81.0	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
TIC: pentane	99.8	µg/Kg		NA	NA	2/4/2008 4:29:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	2/4/2008 11:15:00 AM
ANIONS BY IC, WATER SOLUBLE			**SW9056**			Analyst: **SB**
Chloride	554	mg/Kg		1.00	1.00	2/1/2008 4:24:00 PM
Fluoride	1.86	mg/Kg		1.00	1.00	2/1/2008 4:24:00 PM
Nitrogen, Nitrate	ND	mg/Kg		1.00	1.00	2/1/2008 4:24:00 PM
Nitrogen, Nitrite	9.06	mg/Kg		1.00	5.00	2/1/2008 4:24:00 PM
Sulfate	144	mg/Kg		1.00	50.0	2/1/2008 4:24:00 PM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JL**
Nitrogen, Ammonia	33.6	mg/Kg	J	1.00	50.0	2/4/2008 9:00:00 AM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	38.9	wt%		0.010	0.01	1/29/2008 9:15:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	1,390	mg/Kg		20.0	10.0	2/1/2008 11:35:00 AM
PH			**SW9045C**			Analyst: **DSA**
pH	9.44	SU		NA	NA	2/1/2008 11:35:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-COAL	**Lab ID:**	0801C90-02A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:00:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.398	mg/L		0.0200	0.100	2/5/2008 1:23:00 PM
Calcium	0.464	mg/L	J	0.100	0.500	2/5/2008 1:23:00 PM
Iron	ND	mg/L		0.0200	0.100	2/5/2008 1:23:00 PM
Magnesium	ND	mg/L		0.400	0.500	2/5/2008 1:23:00 PM
Manganese	ND	mg/L		0.0010	0.050	2/5/2008 1:23:00 PM
Potassium	1.23	mg/L		0.300	1.00	2/5/2008 1:23:00 PM
Silicon	0.384	mg/L		0.0100	0.100	2/7/2008 3:34:00 PM
Sodium	10.1	mg/L		0.100	0.500	2/5/2008 1:23:00 PM
Zinc	ND	mg/L		0.0030	0.050	2/5/2008 1:23:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0012	mg/L	J	0.00100	0.0050	2/4/2008 12:28:49 PM
Arsenic	0.0120	mg/L	J	0.00500	0.0250	2/4/2008 12:28:49 PM
Barium	0.0129	mg/L	J	0.00500	0.0250	2/4/2008 12:28:49 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 12:28:49 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 12:28:49 PM
Chromium	ND	mg/L		0.00500	0.0250	2/4/2008 12:28:49 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 12:28:49 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 12:28:49 PM
Lead	ND	mg/L		0.00100	0.0050	2/4/2008 12:28:49 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 12:28:49 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 12:28:49 PM
Selenium	0.0087	mg/L	J	0.00500	0.0250	2/4/2008 12:28:49 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 12:28:49 PM
Strontium	0.0222	mg/L	J	0.00500	0.0250	2/4/2008 12:28:49 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 12:28:49 PM
Vanadium	0.0070	mg/L	J	0.00500	0.0500	2/4/2008 12:28:49 PM
NOTES:						
The reporting limits elevated due to matrix complexity/interference.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:02:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	2/1/2008 5:58:08 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.049	0.11	2/1/2008 12:04:38 AM
TPH (Oil Range)	ND	mg/L		0.051	0.28	2/1/2008 12:04:38 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-COAL	**Lab ID:**	0801C90-02A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:00:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
Surr: o-Terphenyl	83.6	%REC			30-130	2/1/2008 12:04:38 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	2/2/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00069	0.0104	1/30/2008 1:54:00 PM
Acenaphthylene	ND	mg/L		0.00099	0.0104	1/30/2008 1:54:00 PM
Anthracene	ND	mg/L		0.00129	0.0104	1/30/2008 1:54:00 PM
Benzidine	ND	mg/L		0.00074	0.0104	1/30/2008 1:54:00 PM
Benzo(a)anthracene	ND	mg/L		0.00096	0.0104	1/30/2008 1:54:00 PM
Benzo(a)pyrene	ND	mg/L		0.00124	0.0104	1/30/2008 1:54:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00152	0.0104	1/30/2008 1:54:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00197	0.0104	1/30/2008 1:54:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00132	0.0104	1/30/2008 1:54:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00072	0.0104	1/30/2008 1:54:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00093	0.0104	1/30/2008 1:54:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00095	0.0104	1/30/2008 1:54:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00625	0.0104	1/30/2008 1:54:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00119	0.0104	1/30/2008 1:54:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00329	0.0104	1/30/2008 1:54:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00156	0.0104	1/30/2008 1:54:00 PM
2-Chloronaphthalene	ND	mg/L		0.00101	0.0104	1/30/2008 1:54:00 PM
2-Chlorophenol	ND	mg/L		0.00122	0.0104	1/30/2008 1:54:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00074	0.0104	1/30/2008 1:54:00 PM
Chrysene	ND	mg/L		0.00075	0.0104	1/30/2008 1:54:00 PM
o-Cresol	ND	mg/L		0.00099	0.0104	1/30/2008 1:54:00 PM
m,p-Cresol	ND	mg/L		0.00184	0.0208	1/30/2008 1:54:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00139	0.0104	1/30/2008 1:54:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00312	0.0104	1/30/2008 1:54:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00079	0.0104	1/30/2008 1:54:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00084	0.0104	1/30/2008 1:54:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00087	0.0104	1/30/2008 1:54:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00200	0.0104	1/30/2008 1:54:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00130	0.0104	1/30/2008 1:54:00 PM
Diethyl phthalate	ND	mg/L		0.00243	0.0104	1/30/2008 1:54:00 PM
Dimethyl phthalate	ND	mg/L		0.00265	0.0104	1/30/2008 1:54:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00149	0.0104	1/30/2008 1:54:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-COAL	**Lab ID:**	0801C90-02A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:00:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00233	0.0104	1/30/2008 1:54:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00199	0.0104	1/30/2008 1:54:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00191	0.0104	1/30/2008 1:54:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00195	0.0104	1/30/2008 1:54:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00201	0.0104	1/30/2008 1:54:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00090	0.0104	1/30/2008 1:54:00 PM
Fluoranthene	ND	mg/L		0.00163	0.0104	1/30/2008 1:54:00 PM
Fluorene	ND	mg/L		0.00080	0.0104	1/30/2008 1:54:00 PM
Hexachlorobenzene	ND	mg/L		0.00094	0.0104	1/30/2008 1:54:00 PM
Hexachlorobutadiene	ND	mg/L		0.00120	0.0104	1/30/2008 1:54:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00205	0.0104	1/30/2008 1:54:00 PM
Hexachloroethane	ND	mg/L		0.00098	0.0104	1/30/2008 1:54:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00204	0.0104	1/30/2008 1:54:00 PM
Isophorone	ND	mg/L		0.00085	0.0104	1/30/2008 1:54:00 PM
Naphthalene	ND	mg/L		0.00065	0.0104	1/30/2008 1:54:00 PM
Nitrobenzene	ND	mg/L		0.00116	0.0104	1/30/2008 1:54:00 PM
2-Nitrophenol	ND	mg/L		0.00237	0.0104	1/30/2008 1:54:00 PM
4-Nitrophenol	ND	mg/L		0.00155	0.0104	1/30/2008 1:54:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00138	0.0104	1/30/2008 1:54:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00106	0.0104	1/30/2008 1:54:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00104	0.0104	1/30/2008 1:54:00 PM
Pentachlorophenol	ND	mg/L		0.00204	0.0104	1/30/2008 1:54:00 PM
Phenanthrene	ND	mg/L		0.00090	0.0104	1/30/2008 1:54:00 PM
Phenol	ND	mg/L		0.00099	0.0104	1/30/2008 1:54:00 PM
Pyrene	ND	mg/L		0.00123	0.0104	1/30/2008 1:54:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00101	0.0104	1/30/2008 1:54:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00205	0.0104	1/30/2008 1:54:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00191	0.0104	1/30/2008 1:54:00 PM
Surr: 2-Fluorophenol	53.5	%REC			21-110	1/30/2008 1:54:00 PM
Surr: Phenol-d5	36.7	%REC			10-110	1/30/2008 1:54:00 PM
Surr: 2,4,6-Tribromophenol	104	%REC			10-123	1/30/2008 1:54:00 PM
Surr: Nitrobenzene-d5	92.9	%REC			35-114	1/30/2008 1:54:00 PM
Surr: 2-Fluorobiphenyl	84.9	%REC			43-116	1/30/2008 1:54:00 PM
Surr: 4-Terphenyl-d14	85.7	%REC			33-141	1/30/2008 1:54:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	1/30/2008 1:54:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-COAL	**Lab ID:**	0801C90-02A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:00:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	9.9	µg/L	J	4.88	20.0	1/29/2008 4:10:00 PM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 4:10:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 4:10:00 PM
Benzene	1.6	µg/L		0.13	1.0	1/29/2008 4:10:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 4:10:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 4:10:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 4:10:00 PM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 4:10:00 PM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 4:10:00 PM
2-Butanone	ND	µg/L		4.68	10.0	1/29/2008 4:10:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 4:10:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 4:10:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 4:10:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 4:10:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 4:10:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 4:10:00 PM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 4:10:00 PM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 4:10:00 PM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 4:10:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 4:10:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 4:10:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 4:10:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 4:10:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 4:10:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 4:10:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 4:10:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 4:10:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 4:10:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 4:10:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 4:10:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 4:10:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 4:10:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 4:10:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 4:10:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 4:10:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 4:10:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 4:10:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-COAL	**Lab ID:**	0801C90-02A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:00:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 4:10:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 4:10:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 4:10:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 4:10:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 4:10:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 4:10:00 PM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 4:10:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 4:10:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 4:10:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 4:10:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 4:10:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 4:10:00 PM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 4:10:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 4:10:00 PM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 4:10:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 4:10:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 4:10:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 4:10:00 PM
Toluene	2.1	µg/L		0.17	1.0	1/29/2008 4:10:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 4:10:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 4:10:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 4:10:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 4:10:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 4:10:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 4:10:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 4:10:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 4:10:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 4:10:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 4:10:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 4:10:00 PM
o-Xylene	0.3	µg/L	J	0.19	1.0	1/29/2008 4:10:00 PM
m,p-Xylene	0.4	µg/L	J	0.29	2.0	1/29/2008 4:10:00 PM
Surr: 1,2-Dichloroethane-d4	104	%REC			80-120	1/29/2008 4:10:00 PM
Surr: 4-Bromofluorobenzene	98.0	%REC			86-115	1/29/2008 4:10:00 PM
Surr: Dibromofluoromethane	107	%REC			80-120	1/29/2008 4:10:00 PM
Surr: Toluene-d8	106	%REC			88-110	1/29/2008 4:10:00 PM
TIC: 2-methyl 2-propane	2.4	µg/L		NA	NA	1/29/2008 4:10:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-COAL	**Lab ID:**	0801C90-02A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:00:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **BS**
Iron Related Bacteria	ND	CFU/mL		NA	100	1/29/2008 2:50:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **BS**
Sulfate Reducing Bacteria	ND	CFU/mL		NA	100	1/29/2008 2:50:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	1/31/2008 9:30:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.03	mg/L	J	0.020	0.10	1/29/2008 3:30:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	1/29/2008 3:30:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	7.12	mg/L		0.100	1.00	1/29/2008 3:30:00 PM
Fluoride	0.51	mg/L		0.060	0.20	1/29/2008 3:30:00 PM
Sulfate	2.60	mg/L	J	1.00	5.00	1/29/2008 3:30:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.44	mg/L		0.020	0.10	1/30/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	170	µmhos/cm		NA	NA	1/30/2008 6:50:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	87	mg/L		1.0	1	1/30/2008 7:45:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	6	mg/L		1.0	1	1/30/2008 8:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	2/1/2008 11:35:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	42.0	mg/L		1.00	1.0	2/1/2008 11:35:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	14.3	mg/L		1.00	1.0	2/1/2008 11:35:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-COAL	**Lab ID:**	0801C90-02A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:00:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	58.2	mg/L		1.00	1.0	2/1/2008 11:35:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	9.56	SU		NA	NA	2/1/2008 11:35:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-2	**Lab ID:**	0801C90-03A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:57:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.111	mg/L		0.0200	0.100	2/5/2008 1:57:00 PM
Calcium	4.13	mg/L		0.100	0.500	2/5/2008 1:57:00 PM
Iron	0.146	mg/L		0.0200	0.100	2/5/2008 1:57:00 PM
Magnesium	1.55	mg/L		0.400	0.500	2/5/2008 1:57:00 PM
Manganese	0.024	mg/L	J	0.0010	0.050	2/5/2008 1:57:00 PM
Potassium	1.38	mg/L		0.300	1.00	2/5/2008 1:57:00 PM
Silicon	0.514	mg/L		0.0100	0.100	2/7/2008 4:08:00 PM
Sodium	98.6	mg/L		0.100	0.500	2/5/2008 1:57:00 PM
Zinc	0.015	mg/L	J	0.0030	0.050	2/5/2008 1:57:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.088	mg/L	J	0.0200	0.100	2/5/2008 1:28:00 PM
Calcium	12.3	mg/L		0.100	0.500	2/5/2008 1:28:00 PM
Iron	0.514	mg/L		0.0200	0.100	2/5/2008 1:28:00 PM
Magnesium	4.72	mg/L		0.400	0.500	2/5/2008 1:28:00 PM
Manganese	0.064	mg/L		0.0010	0.050	2/5/2008 1:28:00 PM
Potassium	4.74	mg/L		0.300	1.00	2/5/2008 1:28:00 PM
Silicon	4.71	mg/L		0.0100	0.100	2/7/2008 3:40:00 PM
Sodium	291	mg/L		0.100	0.500	2/5/2008 1:28:00 PM
Zinc	0.010	mg/L	J	0.0030	0.050	2/5/2008 1:28:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:08:53 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Barium	0.0882	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:08:53 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:08:53 PM
Chromium	ND	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Lead	ND	mg/L		0.00100	0.0050	2/4/2008 1:08:53 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 1:08:53 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Strontium	0.989	mg/L		0.00500	0.0250	2/4/2008 1:08:53 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:08:53 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 1:08:53 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-2	**Lab ID:**	0801C90-03A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:57:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
NOTES: The reporting limits elevated due to matrix complexity/interference.						
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 12:34:34 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Barium	0.110	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 12:34:34 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 12:34:34 PM
Chromium	ND	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Copper	0.0083	mg/L	J	0.00500	0.0250	2/4/2008 12:34:34 PM
Lead	0.0019	mg/L	J	0.00100	0.0050	2/4/2008 12:34:34 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 12:34:34 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Strontium	1.16	mg/L		0.00500	0.0250	2/4/2008 12:34:34 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 12:34:34 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 12:34:34 PM
NOTES: The reporting limits elevated due to matrix complexity/interference.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:10:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:04:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	2/1/2008 6:10:41 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	0.92	mg/L		0.047	0.11	2/1/2008 12:38:31 AM
TPH (Oil Range)	4.16	mg/L		0.049	0.27	2/5/2008 11:50:14 PM
Surr: o-Terphenyl	82.3	%REC			30-130	2/1/2008 12:38:31 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	2/2/2008

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-2	**Lab ID:**	0801C90-03A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:57:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00067	0.0100	1/30/2008 2:23:00 PM
Acenaphthylene	ND	mg/L		0.00095	0.0100	1/30/2008 2:23:00 PM
Anthracene	ND	mg/L		0.00124	0.0100	1/30/2008 2:23:00 PM
Benzidine	ND	mg/L		0.00071	0.0100	1/30/2008 2:23:00 PM
Benzo(a)anthracene	ND	mg/L		0.00092	0.0100	1/30/2008 2:23:00 PM
Benzo(a)pyrene	ND	mg/L		0.00119	0.0100	1/30/2008 2:23:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00146	0.0100	1/30/2008 2:23:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00189	0.0100	1/30/2008 2:23:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00127	0.0100	1/30/2008 2:23:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00069	0.0100	1/30/2008 2:23:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00089	0.0100	1/30/2008 2:23:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00091	0.0100	1/30/2008 2:23:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00600	0.0100	1/30/2008 2:23:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00114	0.0100	1/30/2008 2:23:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00315	0.0100	1/30/2008 2:23:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00150	0.0100	1/30/2008 2:23:00 PM
2-Chloronaphthalene	ND	mg/L		0.00097	0.0100	1/30/2008 2:23:00 PM
2-Chlorophenol	ND	mg/L		0.00117	0.0100	1/30/2008 2:23:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00071	0.0100	1/30/2008 2:23:00 PM
Chrysene	ND	mg/L		0.00072	0.0100	1/30/2008 2:23:00 PM
o-Cresol	ND	mg/L		0.00095	0.0100	1/30/2008 2:23:00 PM
m,p-Cresol	ND	mg/L		0.00176	0.0200	1/30/2008 2:23:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00133	0.0100	1/30/2008 2:23:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00300	0.0100	1/30/2008 2:23:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00076	0.0100	1/30/2008 2:23:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00080	0.0100	1/30/2008 2:23:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00084	0.0100	1/30/2008 2:23:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00192	0.0100	1/30/2008 2:23:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00124	0.0100	1/30/2008 2:23:00 PM
Diethyl phthalate	ND	mg/L		0.00233	0.0100	1/30/2008 2:23:00 PM
Dimethyl phthalate	ND	mg/L		0.00254	0.0100	1/30/2008 2:23:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00143	0.0100	1/30/2008 2:23:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00223	0.0100	1/30/2008 2:23:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00191	0.0100	1/30/2008 2:23:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00184	0.0100	1/30/2008 2:23:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00187	0.0100	1/30/2008 2:23:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00193	0.0100	1/30/2008 2:23:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-2	**Lab ID:**	0801C90-03A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:57:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/L		0.00087	0.0100	1/30/2008 2:23:00 PM
Fluoranthene	ND	mg/L		0.00156	0.0100	1/30/2008 2:23:00 PM
Fluorene	ND	mg/L		0.00076	0.0100	1/30/2008 2:23:00 PM
Hexachlorobenzene	ND	mg/L		0.00091	0.0100	1/30/2008 2:23:00 PM
Hexachlorobutadiene	ND	mg/L		0.00115	0.0100	1/30/2008 2:23:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00196	0.0100	1/30/2008 2:23:00 PM
Hexachloroethane	ND	mg/L		0.00094	0.0100	1/30/2008 2:23:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00195	0.0100	1/30/2008 2:23:00 PM
Isophorone	ND	mg/L		0.00082	0.0100	1/30/2008 2:23:00 PM
Naphthalene	ND	mg/L		0.00062	0.0100	1/30/2008 2:23:00 PM
Nitrobenzene	ND	mg/L		0.00111	0.0100	1/30/2008 2:23:00 PM
2-Nitrophenol	ND	mg/L		0.00228	0.0100	1/30/2008 2:23:00 PM
4-Nitrophenol	ND	mg/L		0.00149	0.0100	1/30/2008 2:23:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00132	0.0100	1/30/2008 2:23:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00102	0.0100	1/30/2008 2:23:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00100	0.0100	1/30/2008 2:23:00 PM
Pentachlorophenol	ND	mg/L		0.00196	0.0100	1/30/2008 2:23:00 PM
Phenanthrene	ND	mg/L		0.00087	0.0100	1/30/2008 2:23:00 PM
Phenol	ND	mg/L		0.00095	0.0100	1/30/2008 2:23:00 PM
Pyrene	ND	mg/L		0.00118	0.0100	1/30/2008 2:23:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00097	0.0100	1/30/2008 2:23:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00196	0.0100	1/30/2008 2:23:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00184	0.0100	1/30/2008 2:23:00 PM
Surr: 2-Fluorophenol	46.9	%REC			21-110	1/30/2008 2:23:00 PM
Surr: Phenol-d5	31.8	%REC			10-110	1/30/2008 2:23:00 PM
Surr: 2,4,6-Tribromophenol	97.2	%REC			10-123	1/30/2008 2:23:00 PM
Surr: Nitrobenzene-d5	85.6	%REC			35-114	1/30/2008 2:23:00 PM
Surr: 2-Fluorobiphenyl	79.7	%REC			43-116	1/30/2008 2:23:00 PM
Surr: 4-Terphenyl-d14	88.3	%REC			33-141	1/30/2008 2:23:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	1/30/2008 2:23:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	1/29/2008 10:58:00 AM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 10:58:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 10:58:00 AM
Benzene	ND	µg/L		0.13	1.0	1/29/2008 10:58:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 10:58:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-2	**Lab ID:**	0801C90-03A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:57:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 10:58:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 10:58:00 AM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 10:58:00 AM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 10:58:00 AM
2-Butanone	ND	µg/L		4.68	10.0	1/29/2008 10:58:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 10:58:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 10:58:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 10:58:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 10:58:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 10:58:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 10:58:00 AM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 10:58:00 AM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 10:58:00 AM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 10:58:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 10:58:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 10:58:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 10:58:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 10:58:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 10:58:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 10:58:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 10:58:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 10:58:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 10:58:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 10:58:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 10:58:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 10:58:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 10:58:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 10:58:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 10:58:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 10:58:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 10:58:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 10:58:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 10:58:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 10:58:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 10:58:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 10:58:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 10:58:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-2	**Lab ID:**	0801C90-03A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:57:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 10:58:00 AM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 10:58:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 10:58:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 10:58:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 10:58:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 10:58:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 10:58:00 AM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 10:58:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 10:58:00 AM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 10:58:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 10:58:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 10:58:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 10:58:00 AM
Toluene	ND	µg/L		0.17	1.0	1/29/2008 10:58:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 10:58:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 10:58:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 10:58:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 10:58:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 10:58:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 10:58:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 10:58:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 10:58:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 10:58:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 10:58:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 10:58:00 AM
o-Xylene	ND	µg/L		0.19	1.0	1/29/2008 10:58:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	1/29/2008 10:58:00 AM
Surr: 1,2-Dichloroethane-d4	98.6	%REC			80-120	1/29/2008 10:58:00 AM
Surr: 4-Bromofluorobenzene	99.8	%REC			86-115	1/29/2008 10:58:00 AM
Surr: Dibromofluoromethane	104	%REC			80-120	1/29/2008 10:58:00 AM
Surr: Toluene-d8	109	%REC			88-110	1/29/2008 10:58:00 AM
TIC: 1-butanol	2.8	µg/L		NA	NA	1/29/2008 10:58:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	100,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-2	**Lab ID:**	0801C90-03A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:57:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	1/28/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.08	mg/L	J	0.020	0.10	1/24/2008 5:19:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	1/24/2008 5:19:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	69.9	mg/L		0.100	1.00	1/24/2008 5:19:00 PM
Fluoride	0.84	mg/L		0.060	0.20	1/24/2008 5:19:00 PM
Sulfate	78.1	mg/L		1.00	5.00	1/24/2008 5:19:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.39	mg/L		0.020	0.10	1/29/2008 8:50:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	2.2	mg/L	J	2.00	5.0	1/31/2008 8:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	1,430	µmhos/cm		NA	NA	1/29/2008 6:50:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	791	mg/L		1.0	1	1/29/2008 8:45:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	2	mg/L		1.0	1	1/29/2008 8:55:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	40.5	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	532	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	1.3	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	533	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.40	SU		NA	NA	1/28/2008 9:48:00 AM

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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-3	**Lab ID:**	0801C90-04A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:35:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.074	mg/L	J	0.0200	0.100	2/5/2008 2:09:00 PM
Calcium	8.74	mg/L		0.100	0.500	2/5/2008 2:09:00 PM
Iron	0.023	mg/L	J	0.0200	0.100	2/5/2008 2:09:00 PM
Magnesium	6.29	mg/L		0.400	0.500	2/5/2008 2:09:00 PM
Manganese	0.033	mg/L	J	0.0010	0.050	2/5/2008 2:09:00 PM
Potassium	0.761	mg/L	J	0.300	1.00	2/5/2008 2:09:00 PM
Silicon	0.397	mg/L		0.0100	0.100	2/7/2008 4:19:00 PM
Sodium	9.44	mg/L		0.100	0.500	2/5/2008 2:09:00 PM
Zinc	0.018	mg/L	J	0.0030	0.050	2/5/2008 2:09:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.093	mg/L	J	0.0200	0.100	2/5/2008 2:03:00 PM
Calcium	8.89	mg/L		0.100	0.500	2/5/2008 2:03:00 PM
Iron	0.053	mg/L	J	0.0200	0.100	2/5/2008 2:03:00 PM
Magnesium	6.55	mg/L		0.400	0.500	2/5/2008 2:03:00 PM
Manganese	0.033	mg/L	J	0.0010	0.050	2/5/2008 2:03:00 PM
Potassium	0.810	mg/L	J	0.300	1.00	2/5/2008 2:03:00 PM
Silicon	0.414	mg/L		0.0100	0.100	2/7/2008 4:13:00 PM
Sodium	9.73	mg/L		0.100	0.500	2/5/2008 2:03:00 PM
Zinc	0.008	mg/L	J	0.0030	0.050	2/5/2008 2:03:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:20:20 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Barium	0.0414	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:20:20 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:20:20 PM
Chromium	ND	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Lead	ND	mg/L		0.00100	0.0050	2/4/2008 1:20:20 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 1:20:20 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Strontium	0.427	mg/L		0.00500	0.0250	2/4/2008 1:20:20 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:20:20 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 1:20:20 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-3	**Lab ID:**	0801C90-04A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:35:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
NOTES: The reporting limits elevated due to matrix complexity/interference.						
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:14:36 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Barium	0.0418	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:14:36 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:14:36 PM
Chromium	ND	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Lead	ND	mg/L		0.00100	0.0050	2/4/2008 1:14:36 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 1:14:36 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Strontium	0.428	mg/L		0.00500	0.0250	2/4/2008 1:14:36 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:14:36 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 1:14:36 PM
NOTES: The reporting limits elevated due to matrix complexity/interference.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:13:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:12:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	2/1/2008 6:23:13 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.048	0.11	1/31/2008 8:40:55 PM
TPH (Oil Range)	ND	mg/L		0.050	0.27	1/31/2008 8:40:55 PM
Surr: o-Terphenyl	94.4	%REC			30-130	1/31/2008 8:40:55 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	2/2/2008

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-3	**Lab ID:**	0801C90-04A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:35:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00068	0.0102	1/30/2008 2:52:00 PM
Acenaphthylene	ND	mg/L		0.00097	0.0102	1/30/2008 2:52:00 PM
Anthracene	ND	mg/L		0.00126	0.0102	1/30/2008 2:52:00 PM
Benzidine	ND	mg/L		0.00072	0.0102	1/30/2008 2:52:00 PM
Benzo(a)anthracene	ND	mg/L		0.00093	0.0102	1/30/2008 2:52:00 PM
Benzo(a)pyrene	ND	mg/L		0.00121	0.0102	1/30/2008 2:52:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00149	0.0102	1/30/2008 2:52:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00192	0.0102	1/30/2008 2:52:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00129	0.0102	1/30/2008 2:52:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00070	0.0102	1/30/2008 2:52:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00091	0.0102	1/30/2008 2:52:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00093	0.0102	1/30/2008 2:52:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00610	0.0102	1/30/2008 2:52:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00116	0.0102	1/30/2008 2:52:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00321	0.0102	1/30/2008 2:52:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00152	0.0102	1/30/2008 2:52:00 PM
2-Chloronaphthalene	ND	mg/L		0.00099	0.0102	1/30/2008 2:52:00 PM
2-Chlorophenol	ND	mg/L		0.00119	0.0102	1/30/2008 2:52:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00072	0.0102	1/30/2008 2:52:00 PM
Chrysene	ND	mg/L		0.00074	0.0102	1/30/2008 2:52:00 PM
o-Cresol	ND	mg/L		0.00097	0.0102	1/30/2008 2:52:00 PM
m,p-Cresol	ND	mg/L		0.00180	0.0203	1/30/2008 2:52:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00136	0.0102	1/30/2008 2:52:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00305	0.0102	1/30/2008 2:52:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00077	0.0102	1/30/2008 2:52:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00082	0.0102	1/30/2008 2:52:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00085	0.0102	1/30/2008 2:52:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00195	0.0102	1/30/2008 2:52:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00127	0.0102	1/30/2008 2:52:00 PM
Diethyl phthalate	ND	mg/L		0.00237	0.0102	1/30/2008 2:52:00 PM
Dimethyl phthalate	ND	mg/L		0.00259	0.0102	1/30/2008 2:52:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00146	0.0102	1/30/2008 2:52:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00227	0.0102	1/30/2008 2:52:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00195	0.0102	1/30/2008 2:52:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00187	0.0102	1/30/2008 2:52:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00190	0.0102	1/30/2008 2:52:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00196	0.0102	1/30/2008 2:52:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-3	**Lab ID:**	0801C90-04A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:35:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/L		0.00088	0.0102	1/30/2008 2:52:00 PM
Fluoranthene	ND	mg/L		0.00159	0.0102	1/30/2008 2:52:00 PM
Fluorene	ND	mg/L		0.00078	0.0102	1/30/2008 2:52:00 PM
Hexachlorobenzene	ND	mg/L		0.00092	0.0102	1/30/2008 2:52:00 PM
Hexachlorobutadiene	ND	mg/L		0.00117	0.0102	1/30/2008 2:52:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00200	0.0102	1/30/2008 2:52:00 PM
Hexachloroethane	ND	mg/L		0.00096	0.0102	1/30/2008 2:52:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00199	0.0102	1/30/2008 2:52:00 PM
Isophorone	ND	mg/L		0.00083	0.0102	1/30/2008 2:52:00 PM
Naphthalene	ND	mg/L		0.00063	0.0102	1/30/2008 2:52:00 PM
Nitrobenzene	ND	mg/L		0.00113	0.0102	1/30/2008 2:52:00 PM
2-Nitrophenol	ND	mg/L		0.00232	0.0102	1/30/2008 2:52:00 PM
4-Nitrophenol	ND	mg/L		0.00151	0.0102	1/30/2008 2:52:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00134	0.0102	1/30/2008 2:52:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00104	0.0102	1/30/2008 2:52:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00102	0.0102	1/30/2008 2:52:00 PM
Pentachlorophenol	ND	mg/L		0.00199	0.0102	1/30/2008 2:52:00 PM
Phenanthrene	ND	mg/L		0.00088	0.0102	1/30/2008 2:52:00 PM
Phenol	ND	mg/L		0.00097	0.0102	1/30/2008 2:52:00 PM
Pyrene	ND	mg/L		0.00121	0.0102	1/30/2008 2:52:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00099	0.0102	1/30/2008 2:52:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00200	0.0102	1/30/2008 2:52:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00187	0.0102	1/30/2008 2:52:00 PM
Surr: 2-Fluorophenol	48.3	%REC			21-110	1/30/2008 2:52:00 PM
Surr: Phenol-d5	33.0	%REC			10-110	1/30/2008 2:52:00 PM
Surr: 2,4,6-Tribromophenol	99.6	%REC			10-123	1/30/2008 2:52:00 PM
Surr: Nitrobenzene-d5	87.8	%REC			35-114	1/30/2008 2:52:00 PM
Surr: 2-Fluorobiphenyl	80.8	%REC			43-116	1/30/2008 2:52:00 PM
Surr: 4-Terphenyl-d14	88.9	%REC			33-141	1/30/2008 2:52:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	1/30/2008 2:52:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	1/29/2008 11:31:00 AM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 11:31:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 11:31:00 AM
Benzene	ND	µg/L		0.13	1.0	1/29/2008 11:31:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 11:31:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-3	**Lab ID:**	0801C90-04A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:35:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 11:31:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 11:31:00 AM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 11:31:00 AM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 11:31:00 AM
2-Butanone	ND	µg/L		4.68	10.0	1/29/2008 11:31:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 11:31:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 11:31:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 11:31:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 11:31:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 11:31:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 11:31:00 AM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 11:31:00 AM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 11:31:00 AM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 11:31:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 11:31:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 11:31:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 11:31:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 11:31:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 11:31:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 11:31:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 11:31:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 11:31:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 11:31:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 11:31:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 11:31:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 11:31:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 11:31:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 11:31:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 11:31:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 11:31:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 11:31:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 11:31:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 11:31:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 11:31:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 11:31:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 11:31:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 11:31:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-3	**Lab ID:**	0801C90-04A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:35:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 11:31:00 AM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 11:31:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 11:31:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 11:31:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 11:31:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 11:31:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 11:31:00 AM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 11:31:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 11:31:00 AM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 11:31:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 11:31:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 11:31:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 11:31:00 AM
Toluene	ND	µg/L		0.17	1.0	1/29/2008 11:31:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 11:31:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 11:31:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 11:31:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 11:31:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 11:31:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 11:31:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 11:31:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 11:31:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 11:31:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 11:31:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 11:31:00 AM
o-Xylene	ND	µg/L		0.19	1.0	1/29/2008 11:31:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	1/29/2008 11:31:00 AM
Surr: 1,2-Dichloroethane-d4	104	%REC			80-120	1/29/2008 11:31:00 AM
Surr: 4-Bromofluorobenzene	101	%REC			86-115	1/29/2008 11:31:00 AM
Surr: Dibromofluoromethane	107	%REC			80-120	1/29/2008 11:31:00 AM
Surr: Toluene-d8	104	%REC			88-110	1/29/2008 11:31:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	1/29/2008 11:31:00 AM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-3	**Lab ID:**	0801C90-04A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:35:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	1/28/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.70	mg/L		0.020	0.10	1/24/2008 5:19:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	1/24/2008 5:19:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	31.3	mg/L		0.100	1.00	1/24/2008 5:19:00 PM
Fluoride	0.41	mg/L		0.060	0.20	1/24/2008 5:19:00 PM
Sulfate	106	mg/L		1.00	5.00	1/24/2008 5:19:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	1/29/2008 8:50:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	463	µmhos/cm		NA	NA	1/29/2008 6:50:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	251	mg/L		1.0	1	1/29/2008 8:45:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	2	mg/L		1.0	1	1/29/2008 8:55:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	1.4	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	32.7	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	32.8	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.21	SU		NA	NA	1/28/2008 9:48:00 AM

Key:			
MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-4	**Lab ID:**	0801C90-05A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:40:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.077	mg/L	J	0.0200	0.100	2/5/2008 2:21:00 PM
Calcium	3.79	mg/L		0.100	0.500	2/5/2008 2:21:00 PM
Iron	ND	mg/L		0.0200	0.100	2/5/2008 2:21:00 PM
Magnesium	2.95	mg/L		0.400	0.500	2/5/2008 2:21:00 PM
Manganese	0.008	mg/L	J	0.0010	0.050	2/5/2008 2:21:00 PM
Potassium	0.583	mg/L	J	0.300	1.00	2/5/2008 2:21:00 PM
Silicon	0.320	mg/L		0.0100	0.100	2/7/2008 4:30:00 PM
Sodium	0.828	mg/L		0.100	0.500	2/5/2008 2:21:00 PM
Zinc	0.021	mg/L	J	0.0030	0.050	2/5/2008 2:21:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.068	mg/L	J	0.0200	0.100	2/5/2008 2:15:00 PM
Calcium	3.67	mg/L		0.100	0.500	2/5/2008 2:15:00 PM
Iron	0.025	mg/L	J	0.0200	0.100	2/5/2008 2:15:00 PM
Magnesium	3.21	mg/L		0.400	0.500	2/5/2008 2:15:00 PM
Manganese	0.014	mg/L	J	0.0010	0.050	2/5/2008 2:15:00 PM
Potassium	0.639	mg/L	J	0.300	1.00	2/5/2008 2:15:00 PM
Silicon	0.494	mg/L		0.0100	0.100	2/7/2008 4:25:00 PM
Sodium	0.873	mg/L		0.100	0.500	2/5/2008 2:15:00 PM
Zinc	0.006	mg/L	J	0.0030	0.050	2/5/2008 2:15:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:31:50 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Barium	0.0344	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:31:50 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:31:50 PM
Chromium	ND	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Lead	ND	mg/L		0.00100	0.0050	2/4/2008 1:31:50 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 1:31:50 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Strontium	0.0925	mg/L		0.00500	0.0250	2/4/2008 1:31:50 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:31:50 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 1:31:50 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-4	**Lab ID:**	0801C90-05A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:40:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
NOTES: The reporting limits elevated due to matrix complexity/interference.						
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:26:05 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Barium	0.0354	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:26:05 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:26:05 PM
Chromium	ND	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Lead	ND	mg/L		0.00100	0.0050	2/4/2008 1:26:05 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 1:26:05 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Strontium	0.0903	mg/L		0.00500	0.0250	2/4/2008 1:26:05 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:26:05 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 1:26:05 PM
NOTES: The reporting limits elevated due to matrix complexity/interference.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:16:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:14:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	2/1/2008 6:35:41 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.047	0.11	1/31/2008 9:14:54 PM
TPH (Oil Range)	ND	mg/L		0.049	0.26	1/31/2008 9:14:54 PM
Surr: o-Terphenyl	90.8	%REC			30-130	1/31/2008 9:14:54 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	2/2/2008

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-4	**Lab ID:**	0801C90-05A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:40:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00067	0.0101	1/30/2008 3:20:00 PM
Acenaphthylene	ND	mg/L		0.00096	0.0101	1/30/2008 3:20:00 PM
Anthracene	ND	mg/L		0.00125	0.0101	1/30/2008 3:20:00 PM
Benzidine	ND	mg/L		0.00072	0.0101	1/30/2008 3:20:00 PM
Benzo(a)anthracene	ND	mg/L		0.00092	0.0101	1/30/2008 3:20:00 PM
Benzo(a)pyrene	ND	mg/L		0.00120	0.0101	1/30/2008 3:20:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00147	0.0101	1/30/2008 3:20:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00190	0.0101	1/30/2008 3:20:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00128	0.0101	1/30/2008 3:20:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00069	0.0101	1/30/2008 3:20:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00090	0.0101	1/30/2008 3:20:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00092	0.0101	1/30/2008 3:20:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00604	0.0101	1/30/2008 3:20:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00115	0.0101	1/30/2008 3:20:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00317	0.0101	1/30/2008 3:20:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00151	0.0101	1/30/2008 3:20:00 PM
2-Chloronaphthalene	ND	mg/L		0.00098	0.0101	1/30/2008 3:20:00 PM
2-Chlorophenol	ND	mg/L		0.00118	0.0101	1/30/2008 3:20:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00072	0.0101	1/30/2008 3:20:00 PM
Chrysene	ND	mg/L		0.00073	0.0101	1/30/2008 3:20:00 PM
o-Cresol	ND	mg/L		0.00096	0.0101	1/30/2008 3:20:00 PM
m,p-Cresol	ND	mg/L		0.00178	0.0201	1/30/2008 3:20:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00134	0.0101	1/30/2008 3:20:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00302	0.0101	1/30/2008 3:20:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00076	0.0101	1/30/2008 3:20:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00081	0.0101	1/30/2008 3:20:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00084	0.0101	1/30/2008 3:20:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00193	0.0101	1/30/2008 3:20:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00125	0.0101	1/30/2008 3:20:00 PM
Diethyl phthalate	ND	mg/L		0.00234	0.0101	1/30/2008 3:20:00 PM
Dimethyl phthalate	ND	mg/L		0.00256	0.0101	1/30/2008 3:20:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00144	0.0101	1/30/2008 3:20:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00225	0.0101	1/30/2008 3:20:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00192	0.0101	1/30/2008 3:20:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00185	0.0101	1/30/2008 3:20:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00188	0.0101	1/30/2008 3:20:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00194	0.0101	1/30/2008 3:20:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-4	**Lab ID:**	0801C90-05A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:40:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/L		0.00087	0.0101	1/30/2008 3:20:00 PM
Fluoranthene	ND	mg/L		0.00157	0.0101	1/30/2008 3:20:00 PM
Fluorene	ND	mg/L		0.00077	0.0101	1/30/2008 3:20:00 PM
Hexachlorobenzene	ND	mg/L		0.00091	0.0101	1/30/2008 3:20:00 PM
Hexachlorobutadiene	ND	mg/L		0.00116	0.0101	1/30/2008 3:20:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00198	0.0101	1/30/2008 3:20:00 PM
Hexachloroethane	ND	mg/L		0.00095	0.0101	1/30/2008 3:20:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00197	0.0101	1/30/2008 3:20:00 PM
Isophorone	ND	mg/L		0.00082	0.0101	1/30/2008 3:20:00 PM
Naphthalene	ND	mg/L		0.00063	0.0101	1/30/2008 3:20:00 PM
Nitrobenzene	ND	mg/L		0.00112	0.0101	1/30/2008 3:20:00 PM
2-Nitrophenol	ND	mg/L		0.00229	0.0101	1/30/2008 3:20:00 PM
4-Nitrophenol	ND	mg/L		0.00150	0.0101	1/30/2008 3:20:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00133	0.0101	1/30/2008 3:20:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00103	0.0101	1/30/2008 3:20:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00101	0.0101	1/30/2008 3:20:00 PM
Pentachlorophenol	ND	mg/L		0.00197	0.0101	1/30/2008 3:20:00 PM
Phenanthrene	ND	mg/L		0.00087	0.0101	1/30/2008 3:20:00 PM
Phenol	ND	mg/L		0.00096	0.0101	1/30/2008 3:20:00 PM
Pyrene	ND	mg/L		0.00119	0.0101	1/30/2008 3:20:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00098	0.0101	1/30/2008 3:20:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00198	0.0101	1/30/2008 3:20:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00185	0.0101	1/30/2008 3:20:00 PM
Surr: 2-Fluorophenol	46.5	%REC			21-110	1/30/2008 3:20:00 PM
Surr: Phenol-d5	31.5	%REC			10-110	1/30/2008 3:20:00 PM
Surr: 2,4,6-Tribromophenol	97.5	%REC			10-123	1/30/2008 3:20:00 PM
Surr: Nitrobenzene-d5	84.6	%REC			35-114	1/30/2008 3:20:00 PM
Surr: 2-Fluorobiphenyl	77.3	%REC			43-116	1/30/2008 3:20:00 PM
Surr: 4-Terphenyl-d14	87.9	%REC			33-141	1/30/2008 3:20:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	1/30/2008 3:20:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	1/29/2008 12:04:00 PM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 12:04:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 12:04:00 PM
Benzene	ND	µg/L		0.13	1.0	1/29/2008 12:04:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 12:04:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-4	**Lab ID:**	0801C90-05A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:40:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 12:04:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 12:04:00 PM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 12:04:00 PM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 12:04:00 PM
2-Butanone	ND	µg/L		4.68	10.0	1/29/2008 12:04:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 12:04:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 12:04:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 12:04:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 12:04:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 12:04:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 12:04:00 PM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 12:04:00 PM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 12:04:00 PM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 12:04:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 12:04:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 12:04:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 12:04:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 12:04:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 12:04:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 12:04:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 12:04:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 12:04:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 12:04:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 12:04:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 12:04:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 12:04:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 12:04:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 12:04:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 12:04:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 12:04:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 12:04:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 12:04:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 12:04:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 12:04:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 12:04:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 12:04:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 12:04:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-4	**Lab ID:**	0801C90-05A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:40:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 12:04:00 PM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 12:04:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 12:04:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 12:04:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 12:04:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 12:04:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 12:04:00 PM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 12:04:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 12:04:00 PM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 12:04:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 12:04:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 12:04:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 12:04:00 PM
Toluene	ND	µg/L		0.17	1.0	1/29/2008 12:04:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 12:04:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 12:04:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 12:04:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 12:04:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 12:04:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 12:04:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 12:04:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 12:04:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 12:04:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 12:04:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 12:04:00 PM
o-Xylene	ND	µg/L		0.19	1.0	1/29/2008 12:04:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	1/29/2008 12:04:00 PM
Surr: 1,2-Dichloroethane-d4	100	%REC			80-120	1/29/2008 12:04:00 PM
Surr: 4-Bromofluorobenzene	98.2	%REC			86-115	1/29/2008 12:04:00 PM
Surr: Dibromofluoromethane	106	%REC			80-120	1/29/2008 12:04:00 PM
Surr: Toluene-d8	109	%REC			88-110	1/29/2008 12:04:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	1/29/2008 12:04:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-4	**Lab ID:**	0801C90-05A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 10:40:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	1/28/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.95	mg/L		0.020	0.10	1/25/2008 3:36:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	1/25/2008 3:36:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	2.25	mg/L		0.100	1.00	1/25/2008 3:36:00 PM
Fluoride	ND	mg/L		0.060	0.20	1/25/2008 3:36:00 PM
Sulfate	39.3	mg/L		1.00	5.00	1/25/2008 3:36:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.020	0.10	1/29/2008 8:50:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 8:30:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	150	µmhos/cm		NA	NA	1/29/2008 6:50:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	86	mg/L		1.0	1	1/29/2008 8:45:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L		1.0	1	1/29/2008 8:55:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	1.2	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	13.5	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	13.5	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.78	SU		NA	NA	1/28/2008 9:48:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-5	**Lab ID:**	0801C90-06A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:05:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.142	mg/L		0.0200	0.100	2/5/2008 2:32:00 PM
Calcium	24.2	mg/L		0.100	0.500	2/5/2008 2:32:00 PM
Iron	0.039	mg/L	J	0.0200	0.100	2/5/2008 2:32:00 PM
Magnesium	9.36	mg/L		0.400	0.500	2/5/2008 2:32:00 PM
Manganese	0.780	mg/L		0.0010	0.050	2/5/2008 2:32:00 PM
Potassium	3.69	mg/L		0.300	1.00	2/5/2008 2:32:00 PM
Silicon	0.654	mg/L		0.0100	0.100	2/7/2008 4:42:00 PM
Sodium	174	mg/L		0.100	0.500	2/5/2008 2:32:00 PM
Zinc	0.014	mg/L	J	0.0030	0.050	2/5/2008 2:32:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.259	mg/L		0.0200	0.100	2/5/2008 2:27:00 PM
Calcium	22.0	mg/L		0.100	0.500	2/5/2008 2:27:00 PM
Iron	0.400	mg/L		0.0200	0.100	2/5/2008 2:27:00 PM
Magnesium	9.55	mg/L		0.400	0.500	2/5/2008 2:27:00 PM
Manganese	0.777	mg/L		0.0010	0.050	2/5/2008 2:27:00 PM
Potassium	3.71	mg/L		0.300	1.00	2/5/2008 2:27:00 PM
Silicon	0.478	mg/L		0.0100	0.100	2/7/2008 4:36:00 PM
Sodium	176	mg/L		0.100	0.500	2/5/2008 2:27:00 PM
Zinc	0.016	mg/L	J	0.0030	0.050	2/5/2008 2:27:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:43:20 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 1:43:20 PM
Barium	0.0718	mg/L		0.00500	0.0250	2/4/2008 1:43:20 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:43:20 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:43:20 PM
Chromium	0.0156	mg/L	J	0.00500	0.0250	2/4/2008 1:43:20 PM
Cobalt	0.0207	mg/L	J	0.00500	0.0250	2/4/2008 1:43:20 PM
Copper	0.0054	mg/L	J	0.00500	0.0250	2/4/2008 1:43:20 PM
Lead	0.0020	mg/L	J	0.00100	0.0050	2/4/2008 1:43:20 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:43:20 PM
Nickel	0.0270	mg/L	J	0.0100	0.0500	2/4/2008 1:43:20 PM
Selenium	0.0074	mg/L	J	0.00500	0.0250	2/4/2008 1:43:20 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:43:20 PM
Strontium	2.04	mg/L		0.00500	0.0250	2/4/2008 1:43:20 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:43:20 PM
Vanadium	0.0052	mg/L	J	0.00500	0.0500	2/4/2008 1:43:20 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-5	**Lab ID:**	0801C90-06A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:05:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
NOTES: The reporting limits elevated due to matrix complexity/interference.						
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:37:35 PM
Arsenic	ND	mg/L		0.00500	0.0250	2/4/2008 1:37:35 PM
Barium	0.0780	mg/L		0.00500	0.0250	2/4/2008 1:37:35 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:37:35 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:37:35 PM
Chromium	0.0158	mg/L	J	0.00500	0.0250	2/4/2008 1:37:35 PM
Cobalt	0.0231	mg/L	J	0.00500	0.0250	2/4/2008 1:37:35 PM
Copper	0.0065	mg/L	J	0.00500	0.0250	2/4/2008 1:37:35 PM
Lead	0.0020	mg/L	J	0.00100	0.0050	2/4/2008 1:37:35 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:37:35 PM
Nickel	0.0298	mg/L	J	0.0100	0.0500	2/4/2008 1:37:35 PM
Selenium	0.0079	mg/L	J	0.00500	0.0250	2/4/2008 1:37:35 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:37:35 PM
Strontium	2.01	mg/L		0.00500	0.0250	2/4/2008 1:37:35 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:37:35 PM
Vanadium	0.0053	mg/L	J	0.00500	0.0500	2/4/2008 1:37:35 PM
NOTES: The reporting limits elevated due to matrix complexity/interference.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:18:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:17:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	2/1/2008 6:48:07 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.047	0.11	1/31/2008 9:48:48 PM
TPH (Oil Range)	ND	mg/L		0.049	0.27	1/31/2008 9:48:48 PM
Surr: o-Terphenyl	95.5	%REC			30-130	1/31/2008 9:48:48 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	2/2/2008

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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-5	**Lab ID:**	0801C90-06A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:05:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00067	0.0101	1/30/2008 3:49:00 PM
Acenaphthylene	ND	mg/L		0.00096	0.0101	1/30/2008 3:49:00 PM
Anthracene	ND	mg/L		0.00125	0.0101	1/30/2008 3:49:00 PM
Benzidine	ND	mg/L		0.00072	0.0101	1/30/2008 3:49:00 PM
Benzo(a)anthracene	ND	mg/L		0.00093	0.0101	1/30/2008 3:49:00 PM
Benzo(a)pyrene	ND	mg/L		0.00120	0.0101	1/30/2008 3:49:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00147	0.0101	1/30/2008 3:49:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00190	0.0101	1/30/2008 3:49:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00128	0.0101	1/30/2008 3:49:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00069	0.0101	1/30/2008 3:49:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00090	0.0101	1/30/2008 3:49:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00092	0.0101	1/30/2008 3:49:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00605	0.0101	1/30/2008 3:49:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00115	0.0101	1/30/2008 3:49:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00318	0.0101	1/30/2008 3:49:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00151	0.0101	1/30/2008 3:49:00 PM
2-Chloronaphthalene	ND	mg/L		0.00098	0.0101	1/30/2008 3:49:00 PM
2-Chlorophenol	ND	mg/L		0.00118	0.0101	1/30/2008 3:49:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00072	0.0101	1/30/2008 3:49:00 PM
Chrysene	ND	mg/L		0.00073	0.0101	1/30/2008 3:49:00 PM
o-Cresol	ND	mg/L		0.00096	0.0101	1/30/2008 3:49:00 PM
m,p-Cresol	ND	mg/L		0.00178	0.0202	1/30/2008 3:49:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00134	0.0101	1/30/2008 3:49:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00303	0.0101	1/30/2008 3:49:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00076	0.0101	1/30/2008 3:49:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00081	0.0101	1/30/2008 3:49:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00084	0.0101	1/30/2008 3:49:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00194	0.0101	1/30/2008 3:49:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00126	0.0101	1/30/2008 3:49:00 PM
Diethyl phthalate	ND	mg/L		0.00235	0.0101	1/30/2008 3:49:00 PM
Dimethyl phthalate	ND	mg/L		0.00257	0.0101	1/30/2008 3:49:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00145	0.0101	1/30/2008 3:49:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00225	0.0101	1/30/2008 3:49:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00193	0.0101	1/30/2008 3:49:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00185	0.0101	1/30/2008 3:49:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00189	0.0101	1/30/2008 3:49:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00194	0.0101	1/30/2008 3:49:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-5	**Lab ID:**	0801C90-06A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:05:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/L		0.00087	0.0101	1/30/2008 3:49:00 PM
Fluoranthene	ND	mg/L		0.00158	0.0101	1/30/2008 3:49:00 PM
Fluorene	ND	mg/L		0.00077	0.0101	1/30/2008 3:49:00 PM
Hexachlorobenzene	ND	mg/L		0.00091	0.0101	1/30/2008 3:49:00 PM
Hexachlorobutadiene	ND	mg/L		0.00116	0.0101	1/30/2008 3:49:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00198	0.0101	1/30/2008 3:49:00 PM
Hexachloroethane	ND	mg/L		0.00095	0.0101	1/30/2008 3:49:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00197	0.0101	1/30/2008 3:49:00 PM
Isophorone	ND	mg/L		0.00083	0.0101	1/30/2008 3:49:00 PM
Naphthalene	ND	mg/L		0.00063	0.0101	1/30/2008 3:49:00 PM
Nitrobenzene	ND	mg/L		0.00112	0.0101	1/30/2008 3:49:00 PM
2-Nitrophenol	ND	mg/L		0.00230	0.0101	1/30/2008 3:49:00 PM
4-Nitrophenol	ND	mg/L		0.00150	0.0101	1/30/2008 3:49:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00133	0.0101	1/30/2008 3:49:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00103	0.0101	1/30/2008 3:49:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00101	0.0101	1/30/2008 3:49:00 PM
Pentachlorophenol	ND	mg/L		0.00197	0.0101	1/30/2008 3:49:00 PM
Phenanthrene	ND	mg/L		0.00088	0.0101	1/30/2008 3:49:00 PM
Phenol	ND	mg/L		0.00096	0.0101	1/30/2008 3:49:00 PM
Pyrene	ND	mg/L		0.00120	0.0101	1/30/2008 3:49:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00098	0.0101	1/30/2008 3:49:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00198	0.0101	1/30/2008 3:49:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00185	0.0101	1/30/2008 3:49:00 PM
Surr: 2-Fluorophenol	47.6	%REC			21-110	1/30/2008 3:49:00 PM
Surr: Phenol-d5	32.0	%REC			10-110	1/30/2008 3:49:00 PM
Surr: 2,4,6-Tribromophenol	96.8	%REC			10-123	1/30/2008 3:49:00 PM
Surr: Nitrobenzene-d5	87.8	%REC			35-114	1/30/2008 3:49:00 PM
Surr: 2-Fluorobiphenyl	81.1	%REC			43-116	1/30/2008 3:49:00 PM
Surr: 4-Terphenyl-d14	88.5	%REC			33-141	1/30/2008 3:49:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	1/30/2008 3:49:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	1/29/2008 12:37:00 PM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 12:37:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 12:37:00 PM
Benzene	ND	µg/L		0.13	1.0	1/29/2008 12:37:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 12:37:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-5	**Lab ID:**	0801C90-06A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:05:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 12:37:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 12:37:00 PM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 12:37:00 PM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 12:37:00 PM
2-Butanone	ND	µg/L		4.68	10.0	1/29/2008 12:37:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 12:37:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 12:37:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 12:37:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 12:37:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 12:37:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 12:37:00 PM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 12:37:00 PM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 12:37:00 PM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 12:37:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 12:37:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 12:37:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 12:37:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 12:37:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 12:37:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 12:37:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 12:37:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 12:37:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 12:37:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 12:37:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 12:37:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 12:37:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 12:37:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 12:37:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 12:37:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 12:37:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 12:37:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 12:37:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 12:37:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 12:37:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 12:37:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 12:37:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 12:37:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-5	**Lab ID:**	0801C90-06A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:05:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 12:37:00 PM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 12:37:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 12:37:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 12:37:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 12:37:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 12:37:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 12:37:00 PM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 12:37:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 12:37:00 PM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 12:37:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 12:37:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 12:37:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 12:37:00 PM
Toluene	ND	µg/L		0.17	1.0	1/29/2008 12:37:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 12:37:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 12:37:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 12:37:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 12:37:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 12:37:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 12:37:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 12:37:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 12:37:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 12:37:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 12:37:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 12:37:00 PM
o-Xylene	ND	µg/L		0.19	1.0	1/29/2008 12:37:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	1/29/2008 12:37:00 PM
Surr: 1,2-Dichloroethane-d4	101	%REC			80-120	1/29/2008 12:37:00 PM
Surr: 4-Bromofluorobenzene	99.0	%REC			86-115	1/29/2008 12:37:00 PM
Surr: Dibromofluoromethane	108	%REC			80-120	1/29/2008 12:37:00 PM
Surr: Toluene-d8	107	%REC			88-110	1/29/2008 12:37:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	1/29/2008 12:37:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **SB**
Iron Related Bacteria	5,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	100,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM

Key:

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-5	**Lab ID:**	0801C90-06A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 11:05:00 AM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	1/28/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	2.24	mg/L		0.020	0.10	1/25/2008 3:36:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	1/25/2008 3:36:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	194	mg/L		0.100	1.00	1/25/2008 3:36:00 PM
Fluoride	0.15	mg/L	J	0.060	0.20	1/25/2008 3:36:00 PM
Sulfate	334	mg/L		1.00	5.00	1/25/2008 3:36:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.31	mg/L		0.020	0.10	1/29/2008 8:50:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 10:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 10:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	3,100	µmhos/cm		NA	NA	1/29/2008 6:50:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,660	mg/L		1.0	1	1/29/2008 8:45:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	7	mg/L		1.0	1	1/29/2008 8:55:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	4.7	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	303	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	2.4	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	306	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.93	SU		NA	NA	1/28/2008 9:48:00 AM

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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-6	**Lab ID:**	0801C90-07A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 12:40:00 PM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.067	mg/L	J	0.0200	0.100	2/5/2008 3:07:00 PM
Calcium	10.4	mg/L		0.100	0.500	2/5/2008 3:07:00 PM
Iron	10.5	mg/L		0.0200	0.100	2/5/2008 3:07:00 PM
Magnesium	3.02	mg/L		0.400	0.500	2/5/2008 3:07:00 PM
Manganese	0.915	mg/L		0.0010	0.050	2/5/2008 3:07:00 PM
Potassium	1.26	mg/L		0.300	1.00	2/5/2008 3:07:00 PM
Silicon	1.04	mg/L		0.0100	0.100	2/7/2008 5:15:00 PM
Sodium	3.39	mg/L		0.100	0.500	2/5/2008 3:07:00 PM
Zinc	0.041	mg/L	J	0.0030	0.050	2/5/2008 3:07:00 PM
TOTAL RECOVERABLE METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.174	mg/L		0.0200	0.100	2/5/2008 2:38:00 PM
Calcium	28.0	mg/L		0.100	0.500	2/5/2008 2:38:00 PM
Iron	27.9	mg/L		0.0200	0.100	2/5/2008 2:38:00 PM
Magnesium	8.35	mg/L		0.400	0.500	2/5/2008 2:38:00 PM
Manganese	2.43	mg/L		0.0010	0.050	2/5/2008 2:38:00 PM
Potassium	3.52	mg/L		0.300	1.00	2/5/2008 2:38:00 PM
Silicon	6.21	mg/L		0.0100	0.100	2/7/2008 4:47:00 PM
Sodium	9.58	mg/L		0.100	0.500	2/5/2008 2:38:00 PM
Zinc	0.106	mg/L		0.0030	0.050	2/5/2008 2:38:00 PM
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 2:23:25 PM
Arsenic	0.0055	mg/L	J	0.00500	0.0250	2/4/2008 2:23:25 PM
Barium	0.483	mg/L		0.00500	0.0250	2/4/2008 2:23:25 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 2:23:25 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 2:23:25 PM
Chromium	0.0090	mg/L	J	0.00500	0.0250	2/4/2008 2:23:25 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 2:23:25 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 2:23:25 PM
Lead	ND	mg/L		0.00100	0.0050	2/4/2008 2:23:25 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 2:23:25 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 2:23:25 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 2:23:25 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 2:23:25 PM
Strontium	0.267	mg/L		0.00500	0.0250	2/4/2008 2:23:25 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 2:23:25 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 2:23:25 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-6	**Lab ID:**	0801C90-07A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 12:40:00 PM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
DISSOLVED METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
NOTES: The reporting limits elevated due to matrix complexity/interference.						
TOTAL RECOVERABLE METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00100	0.0050	2/4/2008 1:49:06 PM
Arsenic	0.0054	mg/L	J	0.00500	0.0250	2/4/2008 1:49:06 PM
Barium	0.483	mg/L		0.00500	0.0250	2/4/2008 1:49:06 PM
Beryllium	ND	mg/L		0.00100	0.0050	2/4/2008 1:49:06 PM
Cadmium	ND	mg/L		0.00100	0.0050	2/4/2008 1:49:06 PM
Chromium	0.0055	mg/L	J	0.00500	0.0250	2/4/2008 1:49:06 PM
Cobalt	ND	mg/L		0.00500	0.0250	2/4/2008 1:49:06 PM
Copper	ND	mg/L		0.00500	0.0250	2/4/2008 1:49:06 PM
Lead	0.0010	mg/L	J	0.00100	0.0050	2/4/2008 1:49:06 PM
Molybdenum	ND	mg/L		0.00500	0.0250	2/4/2008 1:49:06 PM
Nickel	ND	mg/L		0.0100	0.0500	2/4/2008 1:49:06 PM
Selenium	ND	mg/L		0.00500	0.0250	2/4/2008 1:49:06 PM
Silver	ND	mg/L		0.00500	0.0250	2/4/2008 1:49:06 PM
Strontium	0.264	mg/L		0.00500	0.0250	2/4/2008 1:49:06 PM
Thallium	ND	mg/L		0.00100	0.0050	2/4/2008 1:49:06 PM
Vanadium	ND	mg/L		0.00500	0.0500	2/4/2008 1:49:06 PM
NOTES: The reporting limits elevated due to matrix complexity/interference.						
MERCURY, DISSOLVED			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:21:00 AM
MERCURY, TOTAL			**E245.1**			Analyst: **AB**
Mercury	ND	mg/L		0.00010	0.0010	1/30/2008 7:19:00 AM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0010	0.010	2/1/2008 7:00:36 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.052	0.12	1/31/2008 10:22:53 PM
TPH (Oil Range)	ND	mg/L		0.054	0.29	1/31/2008 10:22:53 PM
Surr: o-Terphenyl	95.0	%REC			30-130	1/31/2008 10:22:53 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	2/2/2008

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PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-6	**Lab ID:**	0801C90-07A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 12:40:00 PM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00067	0.0101	1/30/2008 4:18:00 PM
Acenaphthylene	ND	mg/L		0.00096	0.0101	1/30/2008 4:18:00 PM
Anthracene	ND	mg/L		0.00125	0.0101	1/30/2008 4:18:00 PM
Benzidine	ND	mg/L		0.00072	0.0101	1/30/2008 4:18:00 PM
Benzo(a)anthracene	ND	mg/L		0.00093	0.0101	1/30/2008 4:18:00 PM
Benzo(a)pyrene	ND	mg/L		0.00120	0.0101	1/30/2008 4:18:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00148	0.0101	1/30/2008 4:18:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00191	0.0101	1/30/2008 4:18:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00128	0.0101	1/30/2008 4:18:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00070	0.0101	1/30/2008 4:18:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00091	0.0101	1/30/2008 4:18:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00092	0.0101	1/30/2008 4:18:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00607	0.0101	1/30/2008 4:18:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00116	0.0101	1/30/2008 4:18:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00319	0.0101	1/30/2008 4:18:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00151	0.0101	1/30/2008 4:18:00 PM
2-Chloronaphthalene	ND	mg/L		0.00098	0.0101	1/30/2008 4:18:00 PM
2-Chlorophenol	ND	mg/L		0.00119	0.0101	1/30/2008 4:18:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00072	0.0101	1/30/2008 4:18:00 PM
Chrysene	ND	mg/L		0.00073	0.0101	1/30/2008 4:18:00 PM
o-Cresol	ND	mg/L		0.00097	0.0101	1/30/2008 4:18:00 PM
m,p-Cresol	ND	mg/L		0.00179	0.0202	1/30/2008 4:18:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00135	0.0101	1/30/2008 4:18:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00303	0.0101	1/30/2008 4:18:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00076	0.0101	1/30/2008 4:18:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00081	0.0101	1/30/2008 4:18:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00085	0.0101	1/30/2008 4:18:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00194	0.0101	1/30/2008 4:18:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00126	0.0101	1/30/2008 4:18:00 PM
Diethyl phthalate	ND	mg/L		0.00235	0.0101	1/30/2008 4:18:00 PM
Dimethyl phthalate	ND	mg/L		0.00257	0.0101	1/30/2008 4:18:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00145	0.0101	1/30/2008 4:18:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00226	0.0101	1/30/2008 4:18:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00193	0.0101	1/30/2008 4:18:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00186	0.0101	1/30/2008 4:18:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00189	0.0101	1/30/2008 4:18:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00195	0.0101	1/30/2008 4:18:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-6	**Lab ID:**	0801C90-07A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 12:40:00 PM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,2-Diphenylhydrazine	ND	mg/L		0.00088	0.0101	1/30/2008 4:18:00 PM
Fluoranthene	ND	mg/L		0.00158	0.0101	1/30/2008 4:18:00 PM
Fluorene	ND	mg/L		0.00077	0.0101	1/30/2008 4:18:00 PM
Hexachlorobenzene	ND	mg/L		0.00092	0.0101	1/30/2008 4:18:00 PM
Hexachlorobutadiene	ND	mg/L		0.00116	0.0101	1/30/2008 4:18:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00199	0.0101	1/30/2008 4:18:00 PM
Hexachloroethane	ND	mg/L		0.00095	0.0101	1/30/2008 4:18:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00198	0.0101	1/30/2008 4:18:00 PM
Isophorone	ND	mg/L		0.00083	0.0101	1/30/2008 4:18:00 PM
Naphthalene	ND	mg/L		0.00063	0.0101	1/30/2008 4:18:00 PM
Nitrobenzene	ND	mg/L		0.00113	0.0101	1/30/2008 4:18:00 PM
2-Nitrophenol	ND	mg/L		0.00230	0.0101	1/30/2008 4:18:00 PM
4-Nitrophenol	ND	mg/L		0.00150	0.0101	1/30/2008 4:18:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00134	0.0101	1/30/2008 4:18:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00103	0.0101	1/30/2008 4:18:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00101	0.0101	1/30/2008 4:18:00 PM
Pentachlorophenol	ND	mg/L		0.00198	0.0101	1/30/2008 4:18:00 PM
Phenanthrene	ND	mg/L		0.00088	0.0101	1/30/2008 4:18:00 PM
Phenol	ND	mg/L		0.00096	0.0101	1/30/2008 4:18:00 PM
Pyrene	ND	mg/L		0.00120	0.0101	1/30/2008 4:18:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00098	0.0101	1/30/2008 4:18:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00199	0.0101	1/30/2008 4:18:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00186	0.0101	1/30/2008 4:18:00 PM
Surr: 2-Fluorophenol	47.9	%REC			21-110	1/30/2008 4:18:00 PM
Surr: Phenol-d5	32.5	%REC			10-110	1/30/2008 4:18:00 PM
Surr: 2,4,6-Tribromophenol	101	%REC			10-123	1/30/2008 4:18:00 PM
Surr: Nitrobenzene-d5	87.1	%REC			35-114	1/30/2008 4:18:00 PM
Surr: 2-Fluorobiphenyl	80.8	%REC			43-116	1/30/2008 4:18:00 PM
Surr: 4-Terphenyl-d14	90.4	%REC			33-141	1/30/2008 4:18:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	1/30/2008 4:18:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	1/29/2008 1:10:00 PM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 1:10:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 1:10:00 PM
Benzene	ND	µg/L		0.13	1.0	1/29/2008 1:10:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 1:10:00 PM

Key:			
MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-6	**Lab ID:**	0801C90-07A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 12:40:00 PM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 1:10:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 1:10:00 PM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 1:10:00 PM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 1:10:00 PM
2-Butanone	ND	µg/L		4.68	10.0	1/29/2008 1:10:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 1:10:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 1:10:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 1:10:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 1:10:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 1:10:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 1:10:00 PM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 1:10:00 PM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 1:10:00 PM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 1:10:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 1:10:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 1:10:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 1:10:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 1:10:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 1:10:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 1:10:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 1:10:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 1:10:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 1:10:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 1:10:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 1:10:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 1:10:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 1:10:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 1:10:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 1:10:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 1:10:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 1:10:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 1:10:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 1:10:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 1:10:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 1:10:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 1:10:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 1:10:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-6	**Lab ID:**	0801C90-07A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 12:40:00 PM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 1:10:00 PM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 1:10:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 1:10:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 1:10:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 1:10:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 1:10:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 1:10:00 PM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 1:10:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 1:10:00 PM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 1:10:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 1:10:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 1:10:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 1:10:00 PM
Toluene	ND	µg/L		0.17	1.0	1/29/2008 1:10:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 1:10:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 1:10:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 1:10:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 1:10:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 1:10:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 1:10:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 1:10:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 1:10:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 1:10:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 1:10:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 1:10:00 PM
o-Xylene	ND	µg/L		0.19	1.0	1/29/2008 1:10:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	1/29/2008 1:10:00 PM
Surr: 1,2-Dichloroethane-d4	103	%REC			80-120	1/29/2008 1:10:00 PM
Surr: 4-Bromofluorobenzene	98.5	%REC			86-115	1/29/2008 1:10:00 PM
Surr: Dibromofluoromethane	107	%REC			80-120	1/29/2008 1:10:00 PM
Surr: Toluene-d8	109	%REC			88-110	1/29/2008 1:10:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	1/29/2008 1:10:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **GV**
Iron Related Bacteria	ND	CFU/mL		NA	100	1/24/2008 5:00:00 PM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	10,000	CFU/mL		NA	100	1/24/2008 5:00:00 PM

Key:				
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	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	PL-6	**Lab ID:**	0801C90-07A
Project:	PL SLURRY	**Collection Date:**	1/23/2008 12:40:00 PM
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	1/28/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.02	mg/L	J	0.020	0.10	1/25/2008 3:36:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	1/25/2008 3:36:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	16.5	mg/L		0.100	1.00	1/25/2008 3:36:00 PM
Fluoride	ND	mg/L		0.060	0.20	1/25/2008 3:36:00 PM
Sulfate	18.3	mg/L		1.00	5.00	1/25/2008 3:36:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	1.69	mg/L		0.020	0.10	1/29/2008 8:50:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 10:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	1/31/2008 10:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	309	µmhos/cm		NA	NA	1/29/2008 6:50:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	161	mg/L		1.0	1	1/29/2008 8:45:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	40	mg/L		1.0	1	1/29/2008 8:55:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	74.6	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	123	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	123	mg/L		1.00	1.0	1/28/2008 9:48:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.52	SU		NA	NA	1/28/2008 9:48:00 AM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	TRIP BLANK	**Lab ID:**	0801C90-08A
Project:	PL SLURRY	**Collection Date:**	1/23/2008
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	1/29/2008 1:43:00 PM
Acrolein	ND	µg/L		4.36	10.0	1/29/2008 1:43:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	1/29/2008 1:43:00 PM
Benzene	ND	µg/L		0.13	1.0	1/29/2008 1:43:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	1/29/2008 1:43:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	1/29/2008 1:43:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	1/29/2008 1:43:00 PM
Bromoform	ND	µg/L		0.40	1.0	1/29/2008 1:43:00 PM
Bromomethane	ND	µg/L		0.50	1.0	1/29/2008 1:43:00 PM
2-Butanone	ND	µg/L		4.68	10.0	1/29/2008 1:43:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	1/29/2008 1:43:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	1/29/2008 1:43:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	1/29/2008 1:43:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	1/29/2008 1:43:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	1/29/2008 1:43:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	1/29/2008 1:43:00 PM
Chloroethane	ND	µg/L		0.94	1.0	1/29/2008 1:43:00 PM
Chloroform	ND	µg/L		0.25	1.0	1/29/2008 1:43:00 PM
Chloromethane	ND	µg/L		0.33	1.0	1/29/2008 1:43:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	1/29/2008 1:43:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	1/29/2008 1:43:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	1/29/2008 1:43:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	1/29/2008 1:43:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	1/29/2008 1:43:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	1/29/2008 1:43:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	1/29/2008 1:43:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	1/29/2008 1:43:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	1/29/2008 1:43:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	1/29/2008 1:43:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	1/29/2008 1:43:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	1/29/2008 1:43:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	1/29/2008 1:43:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	1/29/2008 1:43:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	1/29/2008 1:43:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	1/29/2008 1:43:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	1/29/2008 1:43:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	1/29/2008 1:43:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *08-Feb-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0801C90
Client Sample ID:	TRIP BLANK	**Lab ID:**	0801C90-08A
Project:	PL SLURRY	**Collection Date:**	1/23/2008
Site ID:	PL-2 TO PL-6 SLURRY COAL	**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	1/29/2008 1:43:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 1:43:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	1/29/2008 1:43:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	1/29/2008 1:43:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	1/29/2008 1:43:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	1/29/2008 1:43:00 PM
Iodomethane	ND	µg/L		3.44	10.0	1/29/2008 1:43:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	1/29/2008 1:43:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	1/29/2008 1:43:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	1/29/2008 1:43:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	1/29/2008 1:43:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	1/29/2008 1:43:00 PM
Naphthalene	ND	µg/L		0.42	1.0	1/29/2008 1:43:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	1/29/2008 1:43:00 PM
Styrene	ND	µg/L		0.24	1.0	1/29/2008 1:43:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	1/29/2008 1:43:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	1/29/2008 1:43:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	1/29/2008 1:43:00 PM
Toluene	ND	µg/L		0.17	1.0	1/29/2008 1:43:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 1:43:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	1/29/2008 1:43:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	1/29/2008 1:43:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	1/29/2008 1:43:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	1/29/2008 1:43:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	1/29/2008 1:43:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	1/29/2008 1:43:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 1:43:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	1/29/2008 1:43:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	1/29/2008 1:43:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	1/29/2008 1:43:00 PM
o-Xylene	ND	µg/L		0.19	1.0	1/29/2008 1:43:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	1/29/2008 1:43:00 PM
Surr: 1,2-Dichloroethane-d4	103	%REC			80-120	1/29/2008 1:43:00 PM
Surr: 4-Bromofluorobenzene	99.1	%REC			86-115	1/29/2008 1:43:00 PM
Surr: Dibromofluoromethane	106	%REC			80-120	1/29/2008 1:43:00 PM
Surr: Toluene-d8	106	%REC			88-110	1/29/2008 1:43:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	1/29/2008 1:43:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

Power Mountain

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

August 04, 2008

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: PL-SLURRY

Order No.: 0807587

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 12 sample(s) on 7/9/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason A. Clark

Jason Clark
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0807587**
Date: **8/4/2008**

CLIENT: WV DEP - CHARLESTON
Project: PL-SLURRY

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

If you have any questions please contact the project manager whose name is listed above.

The results for the DRO (SGT) samples are:

0807587-01A - ND

0807587-02A - ND

0807587-03A - ND

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0807587**
Date: **8/4/2008**

CLIENT: WV DEP - CHARLESTON
Project: PL-SLURRY

0807587-04A - ND

0807587-05A - ND

0807587-06A - ND

0807587-07A - ND

0807587-08A - ND

0807587-09A - ND

0807587-10A - ND

0807587-11A - ND

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM6	**Lab ID:**	0807587-01A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 1:00:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	1.08	mg/L		0.0200	0.100	7/29/2008 8:57:00 PM
Calcium	80.8	mg/L		0.100	0.500	7/29/2008 8:57:00 PM
Iron	21.2	mg/L		0.0200	0.100	7/29/2008 8:57:00 PM
Magnesium	44.7	mg/L		0.400	0.500	7/29/2008 8:57:00 PM
Manganese	1.50	mg/L		0.0010	0.050	7/29/2008 8:57:00 PM
Potassium	11.9	mg/L		0.300	1.00	7/29/2008 8:57:00 PM
Silicon	5.57	mg/L		0.0100	0.100	7/30/2008 2:34:00 PM
Sodium	353	mg/L		0.100	0.500	7/29/2008 8:57:00 PM
Zinc	0.064	mg/L		0.0030	0.050	7/29/2008 8:57:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0004	mg/L	J	0.00020	0.0010	7/10/2008 4:13:31 PM
Arsenic	0.0019	mg/L	J	0.00100	0.0050	7/10/2008 4:13:31 PM
Barium	0.124	mg/L		0.00100	0.0050	7/10/2008 4:13:31 PM
Beryllium	0.0005	mg/L	J	0.00020	0.0010	7/10/2008 4:13:31 PM
Cadmium	0.0004	mg/L	J	0.00020	0.0010	7/10/2008 4:13:31 PM
Chromium	0.0037	mg/L	J	0.00100	0.0050	7/10/2008 4:13:31 PM
Cobalt	0.0043	mg/L	J	0.00100	0.0050	7/10/2008 4:13:31 PM
Copper	0.0070	mg/L		0.00100	0.0050	7/10/2008 4:13:31 PM
Lead	0.0077	mg/L		0.00020	0.0010	7/10/2008 4:13:31 PM
Molybdenum	0.0027	mg/L	J	0.00100	0.0050	7/10/2008 4:13:31 PM
Nickel	0.0077	mg/L	J	0.00200	0.0100	7/10/2008 4:13:31 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 4:13:31 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 4:13:31 PM
Strontium	1.81	mg/L		0.00100	0.0050	7/10/2008 4:13:31 PM
Thallium	0.0003	mg/L	J	0.00020	0.0010	7/10/2008 4:13:31 PM
Vanadium	0.0031	mg/L	J	0.00100	0.0100	7/10/2008 4:13:31 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:38:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 8:29:27 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.045	0.11	7/12/2008 6:08:02 AM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM6	**Lab ID:**	0807587-01A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 1:00:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.024	0.28	7/12/2008 6:08:02 AM
Surr: o-Terphenyl	109	%REC			30-130	7/12/2008 6:08:02 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Acenaphthylene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Anthracene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Benzidine	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Benzo(a)anthracene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Benzo(a)pyrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00606	0.0101	7/15/2008 12:30:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00505	0.0101	7/15/2008 12:30:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2-Chloronaphthalene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2-Chlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Chrysene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
o-Cresol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
m,p-Cresol	ND	mg/L		0.00505	0.0202	7/15/2008 12:30:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00303	0.0101	7/15/2008 12:30:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
3,3'-Dichlorobenzidine	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Diethyl phthalate	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Dimethyl phthalate	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM6
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-01A
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00505	0.0101	7/15/2008 12:30:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Fluoranthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Fluorene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Hexachlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Hexachlorobutadiene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Hexachloroethane	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Isophorone	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Naphthalene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Nitrobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2-Nitrophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
4-Nitrophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Pentachlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Phenanthrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Phenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Pyrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:30:00 AM
Surr: 2-Fluorophenol	40.5	%REC			21-110	7/15/2008 12:30:00 AM
Surr: Phenol-d5	26.7	%REC			10-110	7/15/2008 12:30:00 AM
Surr: 2,4,6-Tribromophenol	88.5	%REC			10-123	7/15/2008 12:30:00 AM
Surr: Nitrobenzene-d5	77.7	%REC			35-114	7/15/2008 12:30:00 AM
Surr: 2-Fluorobiphenyl	78.4	%REC			43-116	7/15/2008 12:30:00 AM
Surr: 4-Terphenyl-d14	72.6	%REC			33-141	7/15/2008 12:30:00 AM
TIC: Additional analytes	ND	mg/L		NA	NA	7/15/2008 12:30:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM6	**Lab ID:**	0807587-01A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 1:00:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/14/2008 9:43:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/14/2008 9:43:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/14/2008 9:43:00 PM
Benzene	0.3	µg/L	J	0.13	1.0	7/14/2008 9:43:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/14/2008 9:43:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/14/2008 9:43:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/14/2008 9:43:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/14/2008 9:43:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/14/2008 9:43:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/14/2008 9:43:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/14/2008 9:43:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/14/2008 9:43:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/14/2008 9:43:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/14/2008 9:43:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/14/2008 9:43:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/14/2008 9:43:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/14/2008 9:43:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/14/2008 9:43:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/14/2008 9:43:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/14/2008 9:43:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/14/2008 9:43:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/14/2008 9:43:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/14/2008 9:43:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/14/2008 9:43:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/14/2008 9:43:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/14/2008 9:43:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/14/2008 9:43:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/14/2008 9:43:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/14/2008 9:43:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/14/2008 9:43:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/14/2008 9:43:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/14/2008 9:43:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/14/2008 9:43:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/14/2008 9:43:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/14/2008 9:43:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/14/2008 9:43:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/14/2008 9:43:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM6	**Lab ID:**	0807587-01A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 1:00:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/14/2008 9:43:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 9:43:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 9:43:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/14/2008 9:43:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/14/2008 9:43:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/14/2008 9:43:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/14/2008 9:43:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/14/2008 9:43:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/14/2008 9:43:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/14/2008 9:43:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/14/2008 9:43:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/14/2008 9:43:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/14/2008 9:43:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/14/2008 9:43:00 PM
Styrene	ND	µg/L		0.24	1.0	7/14/2008 9:43:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/14/2008 9:43:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/14/2008 9:43:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/14/2008 9:43:00 PM
Toluene	0.3	µg/L	J	0.17	1.0	7/14/2008 9:43:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 9:43:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 9:43:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/14/2008 9:43:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/14/2008 9:43:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/14/2008 9:43:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/14/2008 9:43:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/14/2008 9:43:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 9:43:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 9:43:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/14/2008 9:43:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/14/2008 9:43:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/14/2008 9:43:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/14/2008 9:43:00 PM
Surr: 1,2-Dichloroethane-d4	106	%REC			80-120	7/14/2008 9:43:00 PM
Surr: 4-Bromofluorobenzene	106	%REC			86-115	7/14/2008 9:43:00 PM
Surr: Dibromofluoromethane	116	%REC			80-120	7/14/2008 9:43:00 PM
Surr: Toluene-d8	99.7	%REC			88-110	7/14/2008 9:43:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/14/2008 9:43:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM6	**Lab ID:**	0807587-01A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 1:00:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.07	mg/L	J	0.050	0.10	7/9/2008 5:51:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 5:51:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	33.0	mg/L		0.100	1.00	7/9/2008 12:03:00 PM
Fluoride	0.31	mg/L		0.050	0.20	7/9/2008 12:03:00 PM
Sulfate	696	mg/L		0.700	5.00	7/9/2008 12:03:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	5.09	mg/L		0.030	0.10	7/10/2008 10:00:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	2,230	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,450	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	72	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	30.0	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	375	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	1.2	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	377	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.53	SU		NA	NA	7/10/2008 1:25:00 PM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM6/FIELD FILTERED	**Lab ID:**	0807587-01B
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 1:00:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.498	mg/L		0.0200	0.100	7/29/2008 9:03:00 PM
Calcium	81.2	mg/L		0.100	0.500	7/29/2008 9:03:00 PM
Iron	5.10	mg/L		0.0200	0.100	7/29/2008 9:03:00 PM
Magnesium	44.9	mg/L		0.400	0.500	7/29/2008 9:03:00 PM
Manganese	1.24	mg/L		0.0010	0.050	7/29/2008 9:03:00 PM
Potassium	11.7	mg/L		0.300	1.00	7/29/2008 9:03:00 PM
Silicon	1.28	mg/L		0.0100	0.100	7/30/2008 2:39:00 PM
Sodium	346	mg/L		0.100	0.500	7/29/2008 9:03:00 PM
Zinc	0.034	mg/L	J	0.0030	0.050	7/29/2008 9:03:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 4:19:20 PM
Arsenic	0.0015	mg/L	J	0.00100	0.0050	7/10/2008 4:19:20 PM
Barium	0.0238	mg/L		0.00100	0.0050	7/10/2008 4:19:20 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 4:19:20 PM
Cadmium	0.0008	mg/L	J	0.00020	0.0010	7/10/2008 4:19:20 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 4:19:20 PM
Cobalt	0.0034	mg/L	J	0.00100	0.0050	7/10/2008 4:19:20 PM
Copper	0.0035	mg/L	J	0.00100	0.0050	7/10/2008 4:19:20 PM
Lead	0.0004	mg/L	J	0.00020	0.0010	7/10/2008 4:19:20 PM
Molybdenum	0.0038	mg/L	J	0.00100	0.0050	7/10/2008 4:19:20 PM
Nickel	0.0057	mg/L	J	0.00200	0.0100	7/10/2008 4:19:20 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 4:19:20 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 4:19:20 PM
Strontium	2.09	mg/L		0.00100	0.0050	7/10/2008 4:19:20 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 4:19:20 PM
Vanadium	0.0011	mg/L	J	0.00100	0.0100	7/10/2008 4:19:20 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:39:00 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM13	**Lab ID:**	0807587-02A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:10:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.671	mg/L		0.0200	0.100	7/29/2008 9:20:00 PM
Calcium	163	mg/L		0.100	0.500	7/29/2008 9:20:00 PM
Iron	4.05	mg/L		0.0200	0.100	7/29/2008 9:20:00 PM
Magnesium	67.7	mg/L		0.400	0.500	7/29/2008 9:20:00 PM
Manganese	4.32	mg/L		0.0010	0.050	7/29/2008 9:20:00 PM
Potassium	4.32	mg/L		0.300	1.00	7/29/2008 9:20:00 PM
Silicon	6.95	mg/L		0.0100	0.100	7/30/2008 2:46:00 PM
Sodium	35.7	mg/L		0.100	0.500	7/29/2008 9:20:00 PM
Zinc	0.187	mg/L		0.0030	0.050	7/29/2008 9:20:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 4:25:11 PM
Arsenic	0.0014	mg/L	J	0.00100	0.0050	7/10/2008 4:25:11 PM
Barium	0.0324	mg/L		0.00100	0.0050	7/10/2008 4:25:11 PM
Beryllium	0.0005	mg/L	J	0.00020	0.0010	7/10/2008 4:25:11 PM
Cadmium	0.0005	mg/L	J	0.00020	0.0010	7/10/2008 4:25:11 PM
Chromium	0.0014	mg/L	J	0.00100	0.0050	7/10/2008 4:25:11 PM
Cobalt	0.0188	mg/L		0.00100	0.0050	7/10/2008 4:25:11 PM
Copper	0.0057	mg/L		0.00100	0.0050	7/10/2008 4:25:11 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 4:25:11 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 4:25:11 PM
Nickel	0.0766	mg/L		0.00200	0.0100	7/10/2008 4:25:11 PM
Selenium	0.0027	mg/L	J	0.00100	0.0050	7/10/2008 4:25:11 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 4:25:11 PM
Strontium	0.582	mg/L		0.00100	0.0050	7/10/2008 4:25:11 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 4:25:11 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 4:25:11 PM

NOTES:

The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:41:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 8:41:45 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.043	0.10	7/11/2008 10:09:03 PM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM13	**Lab ID:**	0807587-02A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:10:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/11/2008 10:09:03 PM
Surr: o-Terphenyl	98.2	%REC			30-130	7/11/2008 10:09:03 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Acenaphthylene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Anthracene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Benzidine	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Benzo(a)anthracene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Benzo(a)pyrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Bis(2-ethylhexyl)phthalate	0.0102	mg/L		0.00605	0.0101	7/15/2008 12:01:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00504	0.0101	7/15/2008 12:01:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2-Chloronaphthalene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2-Chlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Chrysene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
o-Cresol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
m,p-Cresol	ND	mg/L		0.00504	0.0202	7/15/2008 12:01:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00302	0.0101	7/15/2008 12:01:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
3,3´-Dichlorobenzidine	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Diethyl phthalate	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Dimethyl phthalate	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM13
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-02A
Collection Date: 7/8/2008 3:10:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00504	0.0101	7/15/2008 12:01:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Fluoranthene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Fluorene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Hexachlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Hexachlorobutadiene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Hexachloroethane	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Isophorone	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Naphthalene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Nitrobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2-Nitrophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
4-Nitrophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Pentachlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Phenanthrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Phenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Pyrene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00202	0.0101	7/15/2008 12:01:00 AM
Surr: 2-Fluorophenol	46.3	%REC			21-110	7/15/2008 12:01:00 AM
Surr: Phenol-d5	29.1	%REC			10-110	7/15/2008 12:01:00 AM
Surr: 2,4,6-Tribromophenol	98.9	%REC			10-123	7/15/2008 12:01:00 AM
Surr: Nitrobenzene-d5	84.7	%REC			35-114	7/15/2008 12:01:00 AM
Surr: 2-Fluorobiphenyl	88.2	%REC			43-116	7/15/2008 12:01:00 AM
Surr: 4-Terphenyl-d14	76.6	%REC			33-141	7/15/2008 12:01:00 AM
TIC: Additional analytes	ND	mg/L		NA	NA	7/15/2008 12:01:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM13
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-02A
Collection Date: 7/8/2008 3:10:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/14/2008 10:16:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/14/2008 10:16:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/14/2008 10:16:00 PM
Benzene	ND	µg/L		0.13	1.0	7/14/2008 10:16:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/14/2008 10:16:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/14/2008 10:16:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/14/2008 10:16:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/14/2008 10:16:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/14/2008 10:16:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/14/2008 10:16:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/14/2008 10:16:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/14/2008 10:16:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/14/2008 10:16:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/14/2008 10:16:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/14/2008 10:16:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/14/2008 10:16:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/14/2008 10:16:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/14/2008 10:16:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/14/2008 10:16:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/14/2008 10:16:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/14/2008 10:16:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/14/2008 10:16:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/14/2008 10:16:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/14/2008 10:16:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/14/2008 10:16:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/14/2008 10:16:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/14/2008 10:16:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/14/2008 10:16:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/14/2008 10:16:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/14/2008 10:16:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/14/2008 10:16:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/14/2008 10:16:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/14/2008 10:16:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/14/2008 10:16:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/14/2008 10:16:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/14/2008 10:16:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/14/2008 10:16:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM13	**Lab ID:**	0807587-02A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:10:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/14/2008 10:16:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 10:16:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 10:16:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/14/2008 10:16:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/14/2008 10:16:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/14/2008 10:16:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/14/2008 10:16:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/14/2008 10:16:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/14/2008 10:16:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/14/2008 10:16:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/14/2008 10:16:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/14/2008 10:16:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/14/2008 10:16:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/14/2008 10:16:00 PM
Styrene	ND	µg/L		0.24	1.0	7/14/2008 10:16:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/14/2008 10:16:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/14/2008 10:16:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/14/2008 10:16:00 PM
Toluene	ND	µg/L		0.17	1.0	7/14/2008 10:16:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 10:16:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 10:16:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/14/2008 10:16:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/14/2008 10:16:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/14/2008 10:16:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/14/2008 10:16:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/14/2008 10:16:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 10:16:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 10:16:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/14/2008 10:16:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/14/2008 10:16:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/14/2008 10:16:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/14/2008 10:16:00 PM
Surr: 1,2-Dichloroethane-d4	99.7	%REC			80-120	7/14/2008 10:16:00 PM
Surr: 4-Bromofluorobenzene	103	%REC			86-115	7/14/2008 10:16:00 PM
Surr: Dibromofluoromethane	117	%REC			80-120	7/14/2008 10:16:00 PM
Surr: Toluene-d8	98.2	%REC			88-110	7/14/2008 10:16:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/14/2008 10:16:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM13	**Lab ID:**	0807587-02A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:10:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.16	mg/L		0.050	0.10	7/9/2008 6:09:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 6:09:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	14.3	mg/L		0.100	1.00	7/9/2008 12:03:00 PM
Fluoride	0.33	mg/L		0.050	0.20	7/9/2008 12:03:00 PM
Sulfate	544	mg/L		0.700	5.00	7/9/2008 12:03:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.17	mg/L		0.030	0.10	7/10/2008 10:00:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	1,340	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,040	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	12	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	6.3	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	77.8	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	78.1	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.57	SU		NA	NA	7/10/2008 1:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM13/FIELD FILTERED	**Lab ID:**	0807587-02B
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:10:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.465	mg/L		0.0200	0.100	7/29/2008 9:37:00 PM
Calcium	165	mg/L		0.100	0.500	7/29/2008 9:37:00 PM
Iron	1.21	mg/L		0.0200	0.100	7/29/2008 9:37:00 PM
Magnesium	68.1	mg/L		0.400	0.500	7/29/2008 9:37:00 PM
Manganese	4.31	mg/L		0.0010	0.050	7/29/2008 9:37:00 PM
Potassium	4.41	mg/L		0.300	1.00	7/29/2008 9:37:00 PM
Silicon	6.44	mg/L		0.0100	0.100	7/30/2008 3:02:00 PM
Sodium	36.8	mg/L		0.100	0.500	7/29/2008 9:37:00 PM
Zinc	0.155	mg/L		0.0030	0.050	7/29/2008 9:37:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 4:42:45 PM
Arsenic	0.0013	mg/L	J	0.00100	0.0050	7/10/2008 4:42:45 PM
Barium	0.0318	mg/L		0.00100	0.0050	7/10/2008 4:42:45 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 4:42:45 PM
Cadmium	0.0005	mg/L	J	0.00020	0.0010	7/10/2008 4:42:45 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 4:42:45 PM
Cobalt	0.0191	mg/L		0.00100	0.0050	7/10/2008 4:42:45 PM
Copper	0.0020	mg/L	J	0.00100	0.0050	7/10/2008 4:42:45 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 4:42:45 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 4:42:45 PM
Nickel	0.0776	mg/L		0.00200	0.0100	7/10/2008 4:42:45 PM
Selenium	0.0027	mg/L	J	0.00100	0.0050	7/10/2008 4:42:45 PM
Silver	0.0007	mg/L	J	0.00020	0.0050	7/10/2008 4:42:45 PM
Strontium	0.660	mg/L		0.00100	0.0050	7/10/2008 4:42:45 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 4:42:45 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 4:42:45 PM

NOTES:

The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:47:00 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM14	**Lab ID:**	0807587-03A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	1.44	mg/L		0.0200	0.100	7/29/2008 9:43:00 PM
Calcium	19.9	mg/L		0.100	0.500	7/29/2008 9:43:00 PM
Iron	1.47	mg/L		0.0200	0.100	7/29/2008 9:43:00 PM
Magnesium	11.3	mg/L		0.400	0.500	7/29/2008 9:43:00 PM
Manganese	0.357	mg/L		0.0010	0.050	7/29/2008 9:43:00 PM
Potassium	3.95	mg/L		0.300	1.00	7/29/2008 9:43:00 PM
Silicon	4.58	mg/L		0.0100	0.100	7/30/2008 3:06:00 PM
Sodium	6.74	mg/L		0.100	0.500	7/29/2008 9:43:00 PM
Zinc	0.065	mg/L		0.0030	0.050	7/29/2008 9:43:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 4:48:37 PM
Arsenic	0.0014	mg/L	J	0.00100	0.0050	7/10/2008 4:48:37 PM
Barium	0.0795	mg/L		0.00100	0.0050	7/10/2008 4:48:37 PM
Beryllium	0.0005	mg/L	J	0.00020	0.0010	7/10/2008 4:48:37 PM
Cadmium	0.0003	mg/L	J	0.00020	0.0010	7/10/2008 4:48:37 PM
Chromium	0.0027	mg/L	J	0.00100	0.0050	7/10/2008 4:48:37 PM
Cobalt	0.0052	mg/L		0.00100	0.0050	7/10/2008 4:48:37 PM
Copper	0.0083	mg/L		0.00100	0.0050	7/10/2008 4:48:37 PM
Lead	0.0059	mg/L		0.00020	0.0010	7/10/2008 4:48:37 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 4:48:37 PM
Nickel	0.0069	mg/L	J	0.00200	0.0100	7/10/2008 4:48:37 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 4:48:37 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 4:48:37 PM
Strontium	0.301	mg/L		0.00100	0.0050	7/10/2008 4:48:37 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 4:48:37 PM
Vanadium	0.0025	mg/L	J	0.00100	0.0100	7/10/2008 4:48:37 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:49:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 8:54:08 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.042	0.10	7/11/2008 9:34:48 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM14
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-03A
Collection Date: 7/8/2008 5:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/11/2008 9:34:48 PM
Surr: o-Terphenyl	90.9	%REC			30-130	7/11/2008 9:34:48 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Acenaphthylene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Benzidine	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Benzo(a)anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Benzo(a)pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Bis(2-ethylhexyl)phthalate	0.0077	mg/L	J	0.00608	0.0101	7/14/2008 11:31:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00506	0.0101	7/14/2008 11:31:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2-Chloronaphthalene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2-Chlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Chrysene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
o-Cresol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
m,p-Cresol	ND	mg/L		0.00506	0.0203	7/14/2008 11:31:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00304	0.0101	7/14/2008 11:31:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Diethyl phthalate	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Dimethyl phthalate	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM14
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-03A
Collection Date: 7/8/2008 5:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00506	0.0101	7/14/2008 11:31:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Fluorene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Hexachlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Hexachlorobutadiene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Hexachloroethane	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Isophorone	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Naphthalene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Nitrobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2-Nitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
4-Nitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Pentachlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Phenanthrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Phenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:31:00 PM
Surr: 2-Fluorophenol	40.2	%REC			21-110	7/14/2008 11:31:00 PM
Surr: Phenol-d5	27.5	%REC			10-110	7/14/2008 11:31:00 PM
Surr: 2,4,6-Tribromophenol	82.8	%REC			10-123	7/14/2008 11:31:00 PM
Surr: Nitrobenzene-d5	77.8	%REC			35-114	7/14/2008 11:31:00 PM
Surr: 2-Fluorobiphenyl	81.2	%REC			43-116	7/14/2008 11:31:00 PM
Surr: 4-Terphenyl-d14	73.6	%REC			33-141	7/14/2008 11:31:00 PM
TIC: Benzamide, N,N-diethyl-3-methyl-	0.0189	mg/L		NA	NA	7/14/2008 11:31:00 PM

Key:

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MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM14
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-03A
Collection Date: 7/8/2008 5:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/14/2008 10:49:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/14/2008 10:49:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/14/2008 10:49:00 PM
Benzene	ND	µg/L		0.13	1.0	7/14/2008 10:49:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/14/2008 10:49:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/14/2008 10:49:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/14/2008 10:49:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/14/2008 10:49:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/14/2008 10:49:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/14/2008 10:49:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/14/2008 10:49:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/14/2008 10:49:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/14/2008 10:49:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/14/2008 10:49:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/14/2008 10:49:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/14/2008 10:49:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/14/2008 10:49:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/14/2008 10:49:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/14/2008 10:49:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/14/2008 10:49:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/14/2008 10:49:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/14/2008 10:49:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/14/2008 10:49:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/14/2008 10:49:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/14/2008 10:49:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/14/2008 10:49:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/14/2008 10:49:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/14/2008 10:49:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/14/2008 10:49:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/14/2008 10:49:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/14/2008 10:49:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/14/2008 10:49:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/14/2008 10:49:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/14/2008 10:49:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/14/2008 10:49:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/14/2008 10:49:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/14/2008 10:49:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM14
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-03A
Collection Date: 7/8/2008 5:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/14/2008 10:49:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 10:49:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 10:49:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/14/2008 10:49:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/14/2008 10:49:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/14/2008 10:49:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/14/2008 10:49:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/14/2008 10:49:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/14/2008 10:49:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/14/2008 10:49:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/14/2008 10:49:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/14/2008 10:49:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/14/2008 10:49:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/14/2008 10:49:00 PM
Styrene	ND	µg/L		0.24	1.0	7/14/2008 10:49:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/14/2008 10:49:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/14/2008 10:49:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/14/2008 10:49:00 PM
Toluene	ND	µg/L		0.17	1.0	7/14/2008 10:49:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 10:49:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 10:49:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/14/2008 10:49:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/14/2008 10:49:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/14/2008 10:49:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/14/2008 10:49:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/14/2008 10:49:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 10:49:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 10:49:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/14/2008 10:49:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/14/2008 10:49:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/14/2008 10:49:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/14/2008 10:49:00 PM
Surr: 1,2-Dichloroethane-d4	99.0	%REC			80-120	7/14/2008 10:49:00 PM
Surr: 4-Bromofluorobenzene	102	%REC			86-115	7/14/2008 10:49:00 PM
Surr: Dibromofluoromethane	109	%REC			80-120	7/14/2008 10:49:00 PM
Surr: Toluene-d8	99.1	%REC			88-110	7/14/2008 10:49:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/14/2008 10:49:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM14	**Lab ID:**	0807587-03A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 5:15:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.32	mg/L		0.050	0.10	7/9/2008 6:09:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 6:09:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	5.11	mg/L		0.100	1.00	7/9/2008 12:03:00 PM
Fluoride	0.34	mg/L		0.050	0.20	7/9/2008 12:03:00 PM
Sulfate	56.0	mg/L		0.700	5.00	7/9/2008 12:03:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.04	mg/L	J	0.030	0.10	7/10/2008 10:00:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	211	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	114	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	634	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	4.7	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	32.8	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	32.8	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.96	SU		NA	NA	7/10/2008 1:25:00 PM

Key:			
MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM14/FIELD FILTERED
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-03B
Collection Date: 7/8/2008 5:15:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.224	mg/L		0.0200	0.100	7/29/2008 9:49:00 PM
Calcium	19.2	mg/L		0.100	0.500	7/29/2008 9:49:00 PM
Iron	0.091	mg/L	J	0.0200	0.100	7/29/2008 9:49:00 PM
Magnesium	10.9	mg/L		0.400	0.500	7/29/2008 9:49:00 PM
Manganese	0.043	mg/L	J	0.0010	0.050	7/29/2008 9:49:00 PM
Potassium	3.63	mg/L		0.300	1.00	7/29/2008 9:49:00 PM
Silicon	3.26	mg/L		0.0100	0.100	7/30/2008 3:22:00 PM
Sodium	7.58	mg/L		0.100	0.500	7/29/2008 9:49:00 PM
Zinc	0.031	mg/L	J	0.0030	0.050	7/29/2008 9:49:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 4:54:29 PM
Arsenic	0.0012	mg/L	J	0.00100	0.0050	7/10/2008 4:54:29 PM
Barium	0.0315	mg/L		0.00100	0.0050	7/10/2008 4:54:29 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 4:54:29 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 4:54:29 PM
Chromium	0.0021	mg/L	J	0.00100	0.0050	7/10/2008 4:54:29 PM
Cobalt	0.0011	mg/L	J	0.00100	0.0050	7/10/2008 4:54:29 PM
Copper	0.0037	mg/L	J	0.00100	0.0050	7/10/2008 4:54:29 PM
Lead	0.0007	mg/L	J	0.00020	0.0010	7/10/2008 4:54:29 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 4:54:29 PM
Nickel	0.0027	mg/L	J	0.00200	0.0100	7/10/2008 4:54:29 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 4:54:29 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 4:54:29 PM
Strontium	0.309	mg/L		0.00100	0.0050	7/10/2008 4:54:29 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 4:54:29 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 4:54:29 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:50:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-3	**Lab ID:**	0807587-04A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:59:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.449	mg/L		0.0200	0.100	7/29/2008 9:55:00 PM
Calcium	188	mg/L		0.100	0.500	7/29/2008 9:55:00 PM
Iron	0.095	mg/L	J	0.0200	0.100	7/29/2008 9:55:00 PM
Magnesium	146	mg/L		0.400	0.500	7/29/2008 9:55:00 PM
Manganese	0.493	mg/L		0.0010	0.050	7/29/2008 9:55:00 PM
Potassium	12.9	mg/L		0.300	1.00	7/29/2008 9:55:00 PM
Silicon	2.31	mg/L		0.0100	0.100	7/30/2008 3:27:00 PM
Sodium	36.9	mg/L		0.100	0.500	7/29/2008 9:55:00 PM
Zinc	0.015	mg/L	J	0.0030	0.050	7/29/2008 9:55:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:00:21 PM
Arsenic	0.0010	mg/L	J	0.00100	0.0050	7/10/2008 5:00:21 PM
Barium	0.0499	mg/L		0.00100	0.0050	7/10/2008 5:00:21 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:00:21 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 5:00:21 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 5:00:21 PM
Cobalt	0.0020	mg/L	J	0.00100	0.0050	7/10/2008 5:00:21 PM
Copper	0.0024	mg/L	J	0.00100	0.0050	7/10/2008 5:00:21 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 5:00:21 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:00:21 PM
Nickel	0.0103	mg/L		0.00200	0.0100	7/10/2008 5:00:21 PM
Selenium	0.0047	mg/L	J	0.00100	0.0050	7/10/2008 5:00:21 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:00:21 PM
Strontium	0.903	mg/L		0.00100	0.0050	7/10/2008 5:00:21 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:00:21 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:00:21 PM

NOTES:

The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:51:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 9:06:31 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.042	0.10	7/12/2008 1:00:02 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-3	**Lab ID:**	0807587-04A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:59:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.25	7/12/2008 1:00:02 AM
Surr: o-Terphenyl	84.7	%REC			30-130	7/12/2008 1:00:02 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Acenaphthylene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Benzidine	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Benzo(a)anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Benzo(a)pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Bis(2-ethylhexyl)phthalate	0.0083	mg/L	J	0.00608	0.0101	7/14/2008 11:02:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00507	0.0101	7/14/2008 11:02:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2-Chloronaphthalene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2-Chlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Chrysene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
o-Cresol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
m,p-Cresol	ND	mg/L		0.00507	0.0203	7/14/2008 11:02:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00304	0.0101	7/14/2008 11:02:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Diethyl phthalate	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Dimethyl phthalate	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-3	**Lab ID:**	0807587-04A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:59:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00507	0.0101	7/14/2008 11:02:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Fluorene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Hexachlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Hexachlorobutadiene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Hexachloroethane	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Isophorone	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Naphthalene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Nitrobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2-Nitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
4-Nitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Pentachlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Phenanthrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Phenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 11:02:00 PM
Surr: 2-Fluorophenol	47.0	%REC			21-110	7/14/2008 11:02:00 PM
Surr: Phenol-d5	29.8	%REC			10-110	7/14/2008 11:02:00 PM
Surr: 2,4,6-Tribromophenol	94.9	%REC			10-123	7/14/2008 11:02:00 PM
Surr: Nitrobenzene-d5	83.8	%REC			35-114	7/14/2008 11:02:00 PM
Surr: 2-Fluorobiphenyl	86.1	%REC			43-116	7/14/2008 11:02:00 PM
Surr: 4-Terphenyl-d14	75.1	%REC			33-141	7/14/2008 11:02:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 11:02:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-3	**Lab ID:**	0807587-04A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:59:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/14/2008 11:22:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/14/2008 11:22:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/14/2008 11:22:00 PM
Benzene	ND	µg/L		0.13	1.0	7/14/2008 11:22:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/14/2008 11:22:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/14/2008 11:22:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/14/2008 11:22:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/14/2008 11:22:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/14/2008 11:22:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/14/2008 11:22:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/14/2008 11:22:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/14/2008 11:22:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/14/2008 11:22:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/14/2008 11:22:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/14/2008 11:22:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/14/2008 11:22:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/14/2008 11:22:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/14/2008 11:22:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/14/2008 11:22:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/14/2008 11:22:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/14/2008 11:22:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/14/2008 11:22:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/14/2008 11:22:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/14/2008 11:22:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/14/2008 11:22:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/14/2008 11:22:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/14/2008 11:22:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/14/2008 11:22:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/14/2008 11:22:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/14/2008 11:22:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/14/2008 11:22:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/14/2008 11:22:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/14/2008 11:22:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/14/2008 11:22:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/14/2008 11:22:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/14/2008 11:22:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/14/2008 11:22:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-3
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-04A
Collection Date: 7/8/2008 3:59:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/14/2008 11:22:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 11:22:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 11:22:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/14/2008 11:22:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/14/2008 11:22:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/14/2008 11:22:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/14/2008 11:22:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/14/2008 11:22:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/14/2008 11:22:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/14/2008 11:22:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/14/2008 11:22:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/14/2008 11:22:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/14/2008 11:22:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/14/2008 11:22:00 PM
Styrene	ND	µg/L		0.24	1.0	7/14/2008 11:22:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/14/2008 11:22:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/14/2008 11:22:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/14/2008 11:22:00 PM
Toluene	ND	µg/L		0.17	1.0	7/14/2008 11:22:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 11:22:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 11:22:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/14/2008 11:22:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/14/2008 11:22:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/14/2008 11:22:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/14/2008 11:22:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/14/2008 11:22:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 11:22:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 11:22:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/14/2008 11:22:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/14/2008 11:22:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/14/2008 11:22:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/14/2008 11:22:00 PM
Surr: 1,2-Dichloroethane-d4	100	%REC			80-120	7/14/2008 11:22:00 PM
Surr: 4-Bromofluorobenzene	103	%REC			86-115	7/14/2008 11:22:00 PM
Surr: Dibromofluoromethane	114	%REC			80-120	7/14/2008 11:22:00 PM
Surr: Toluene-d8	98.3	%REC			88-110	7/14/2008 11:22:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/14/2008 11:22:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-3	**Lab ID:**	0807587-04A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:59:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	1.94	mg/L		0.050	0.10	7/9/2008 6:27:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 6:27:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	9.47	mg/L		0.100	1.00	7/9/2008 12:03:00 PM
Fluoride	0.07	mg/L	J	0.050	0.20	7/9/2008 12:03:00 PM
Sulfate	1,110	mg/L		0.700	5.00	7/9/2008 12:03:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.030	0.10	7/11/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	2,090	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,810	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	7	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	3.3	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	78.6	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	79.1	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.87	SU		NA	NA	7/10/2008 1:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-3/FIELD FILTERED	**Lab ID:**	0807587-04B
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 3:59:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.180	mg/L		0.0200	0.100	7/29/2008 10:01:00 PM
Calcium	16.0	mg/L		0.100	0.500	7/29/2008 10:01:00 PM
Iron	0.064	mg/L	J	0.0200	0.100	7/29/2008 10:01:00 PM
Magnesium	15.9	mg/L		0.400	0.500	7/29/2008 10:01:00 PM
Manganese	0.050	mg/L		0.0010	0.050	7/29/2008 10:01:00 PM
Potassium	1.42	mg/L		0.300	1.00	7/29/2008 10:01:00 PM
Silicon	0.265	mg/L		0.0100	0.100	7/30/2008 3:32:00 PM
Sodium	5.92	mg/L		0.100	0.500	7/29/2008 10:01:00 PM
Zinc	0.061	mg/L		0.0030	0.050	7/29/2008 10:01:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:06:15 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/10/2008 5:06:15 PM
Barium	0.0050	mg/L	J	0.00100	0.0050	7/10/2008 5:06:15 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:06:15 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 5:06:15 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 5:06:15 PM
Cobalt	0.0011	mg/L	J	0.00100	0.0050	7/10/2008 5:06:15 PM
Copper	0.0044	mg/L	J	0.00100	0.0050	7/10/2008 5:06:15 PM
Lead	0.0008	mg/L	J	0.00020	0.0010	7/10/2008 5:06:15 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:06:15 PM
Nickel	0.0029	mg/L	J	0.00200	0.0100	7/10/2008 5:06:15 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:06:15 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:06:15 PM
Strontium	0.0773	mg/L		0.00100	0.0050	7/10/2008 5:06:15 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:06:15 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:06:15 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:53:00 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-9	**Lab ID:**	0807587-05A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 12:40:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.188	mg/L		0.0200	0.100	7/29/2008 10:06:00 PM
Calcium	18.7	mg/L		0.100	0.500	7/29/2008 10:06:00 PM
Iron	0.022	mg/L	J	0.0200	0.100	7/29/2008 10:06:00 PM
Magnesium	12.7	mg/L		0.400	0.500	7/29/2008 10:06:00 PM
Manganese	0.002	mg/L	J	0.0010	0.050	7/29/2008 10:06:00 PM
Potassium	2.24	mg/L		0.300	1.00	7/29/2008 10:06:00 PM
Silicon	3.77	mg/L		0.0100	0.100	7/30/2008 3:38:00 PM
Sodium	4.69	mg/L		0.100	0.500	7/29/2008 10:06:00 PM
Zinc	0.012	mg/L	J	0.0030	0.050	7/29/2008 10:06:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:23:47 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/10/2008 5:23:47 PM
Barium	0.0488	mg/L		0.00100	0.0050	7/10/2008 5:23:47 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:23:47 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 5:23:47 PM
Chromium	0.0010	mg/L	J	0.00100	0.0050	7/10/2008 5:23:47 PM
Cobalt	ND	mg/L		0.00100	0.0050	7/10/2008 5:23:47 PM
Copper	0.0110	mg/L		0.00100	0.0050	7/10/2008 5:23:47 PM
Lead	0.0006	mg/L	J	0.00020	0.0010	7/10/2008 5:23:47 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:23:47 PM
Nickel	0.0024	mg/L	J	0.00200	0.0100	7/10/2008 5:23:47 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:23:47 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:23:47 PM
Strontium	0.146	mg/L		0.00100	0.0050	7/10/2008 5:23:47 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:23:47 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:23:47 PM

NOTES:

The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:54:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 9:18:51 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.043	0.10	7/12/2008 1:34:19 AM

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-9	**Lab ID:**	0807587-05A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 12:40:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/12/2008 1:34:19 AM
Surr: o-Terphenyl	91.2	%REC			30-130	7/12/2008 1:34:19 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Acenaphthylene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Anthracene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Benzidine	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Benzo(a)anthracene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Benzo(a)pyrene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Bis(2-ethylhexyl)phthalate	0.0069	mg/L	J	0.00610	0.0102	7/14/2008 10:32:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00508	0.0102	7/14/2008 10:32:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2-Chloronaphthalene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2-Chlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Chrysene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
o-Cresol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
m,p-Cresol	ND	mg/L		0.00508	0.0203	7/14/2008 10:32:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00305	0.0102	7/14/2008 10:32:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Diethyl phthalate	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Dimethyl phthalate	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-9
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-05A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00508	0.0102	7/14/2008 10:32:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Fluoranthene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Fluorene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Hexachlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Hexachlorobutadiene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Hexachloroethane	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Isophorone	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Naphthalene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Nitrobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2-Nitrophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
4-Nitrophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Pentachlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Phenanthrene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Phenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Pyrene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 10:32:00 PM
Surr: 2-Fluorophenol	43.3	%REC			21-110	7/14/2008 10:32:00 PM
Surr: Phenol-d5	29.3	%REC			10-110	7/14/2008 10:32:00 PM
Surr: 2,4,6-Tribromophenol	94.7	%REC			10-123	7/14/2008 10:32:00 PM
Surr: Nitrobenzene-d5	81.9	%REC			35-114	7/14/2008 10:32:00 PM
Surr: 2-Fluorobiphenyl	82.6	%REC			43-116	7/14/2008 10:32:00 PM
Surr: 4-Terphenyl-d14	73.2	%REC			33-141	7/14/2008 10:32:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 10:32:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-9
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-05A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/14/2008 11:55:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/14/2008 11:55:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/14/2008 11:55:00 PM
Benzene	ND	µg/L		0.13	1.0	7/14/2008 11:55:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/14/2008 11:55:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/14/2008 11:55:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/14/2008 11:55:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/14/2008 11:55:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/14/2008 11:55:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/14/2008 11:55:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/14/2008 11:55:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/14/2008 11:55:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/14/2008 11:55:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/14/2008 11:55:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/14/2008 11:55:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/14/2008 11:55:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/14/2008 11:55:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/14/2008 11:55:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/14/2008 11:55:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/14/2008 11:55:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/14/2008 11:55:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/14/2008 11:55:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/14/2008 11:55:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/14/2008 11:55:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/14/2008 11:55:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/14/2008 11:55:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/14/2008 11:55:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/14/2008 11:55:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/14/2008 11:55:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/14/2008 11:55:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/14/2008 11:55:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/14/2008 11:55:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/14/2008 11:55:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/14/2008 11:55:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/14/2008 11:55:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/14/2008 11:55:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/14/2008 11:55:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-9
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-05A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/14/2008 11:55:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 11:55:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 11:55:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/14/2008 11:55:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/14/2008 11:55:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/14/2008 11:55:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/14/2008 11:55:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/14/2008 11:55:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/14/2008 11:55:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/14/2008 11:55:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/14/2008 11:55:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/14/2008 11:55:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/14/2008 11:55:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/14/2008 11:55:00 PM
Styrene	ND	µg/L		0.24	1.0	7/14/2008 11:55:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/14/2008 11:55:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/14/2008 11:55:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/14/2008 11:55:00 PM
Toluene	ND	µg/L		0.17	1.0	7/14/2008 11:55:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 11:55:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 11:55:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/14/2008 11:55:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/14/2008 11:55:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/14/2008 11:55:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/14/2008 11:55:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/14/2008 11:55:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 11:55:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 11:55:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/14/2008 11:55:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/14/2008 11:55:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/14/2008 11:55:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/14/2008 11:55:00 PM
Surr: 1,2-Dichloroethane-d4	104	%REC			80-120	7/14/2008 11:55:00 PM
Surr: 4-Bromofluorobenzene	101	%REC			86-115	7/14/2008 11:55:00 PM
Surr: Dibromofluoromethane	114	%REC			80-120	7/14/2008 11:55:00 PM
Surr: Toluene-d8	100	%REC			88-110	7/14/2008 11:55:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/14/2008 11:55:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-9
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-05A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.89	mg/L		0.050	0.10	7/9/2008 6:45:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 6:45:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	5.80	mg/L		0.100	1.00	7/9/2008 12:03:00 PM
Fluoride	ND	mg/L		0.050	0.20	7/9/2008 12:03:00 PM
Sulfate	72.4	mg/L		0.700	5.00	7/9/2008 12:03:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.030	0.10	7/11/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	224	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	106	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	3	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	29.0	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	17.2	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	17.2	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	6.02	SU		NA	NA	7/10/2008 1:25:00 PM

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MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-9/FIELD FILTERED	**Lab ID:**	0807587-05B
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 12:40:00 PM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.214	mg/L		0.0200	0.100	7/29/2008 10:12:00 PM
Calcium	19.7	mg/L		0.100	0.500	7/29/2008 10:12:00 PM
Iron	0.024	mg/L	J	0.0200	0.100	7/29/2008 10:12:00 PM
Magnesium	12.9	mg/L		0.400	0.500	7/29/2008 10:12:00 PM
Manganese	0.083	mg/L		0.0010	0.050	7/29/2008 10:12:00 PM
Potassium	2.27	mg/L		0.300	1.00	7/29/2008 10:12:00 PM
Silicon	3.66	mg/L		0.0100	0.100	7/30/2008 3:43:00 PM
Sodium	4.73	mg/L		0.100	0.500	7/29/2008 10:12:00 PM
Zinc	0.025	mg/L	J	0.0030	0.050	7/29/2008 10:12:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:29:38 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/10/2008 5:29:38 PM
Barium	0.0461	mg/L		0.00100	0.0050	7/10/2008 5:29:38 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:29:38 PM
Cadmium	0.0009	mg/L	J	0.00020	0.0010	7/10/2008 5:29:38 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 5:29:38 PM
Cobalt	0.0019	mg/L	J	0.00100	0.0050	7/10/2008 5:29:38 PM
Copper	0.0098	mg/L		0.00100	0.0050	7/10/2008 5:29:38 PM
Lead	0.0005	mg/L	J	0.00020	0.0010	7/10/2008 5:29:38 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:29:38 PM
Nickel	0.0037	mg/L	J	0.00200	0.0100	7/10/2008 5:29:38 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:29:38 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:29:38 PM
Strontium	0.138	mg/L		0.00100	0.0050	7/10/2008 5:29:38 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:29:38 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:29:38 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:55:00 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-11
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-06A
Collection Date: 7/8/2008 11:44:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.024	mg/L	J	0.0200	0.100	7/29/2008 10:30:00 PM
Calcium	0.107	mg/L	J	0.100	0.500	7/29/2008 10:30:00 PM
Iron	0.021	mg/L	J	0.0200	0.100	7/29/2008 10:30:00 PM
Magnesium	ND	mg/L		0.400	0.500	7/29/2008 10:30:00 PM
Manganese	0.001	mg/L	J	0.0010	0.050	7/29/2008 10:30:00 PM
Potassium	ND	mg/L		0.300	1.00	7/29/2008 10:30:00 PM
Silicon	ND	mg/L		0.0100	0.100	7/29/2008 10:30:00 PM
Sodium	106	mg/L		0.100	0.500	7/29/2008 10:30:00 PM
Zinc	0.006	mg/L	J	0.0030	0.050	7/29/2008 10:30:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:35:29 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/10/2008 5:35:29 PM
Barium	0.0015	mg/L	J	0.00100	0.0050	7/10/2008 5:35:29 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:35:29 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 5:35:29 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 5:35:29 PM
Cobalt	ND	mg/L		0.00100	0.0050	7/10/2008 5:35:29 PM
Copper	0.0049	mg/L	J	0.00100	0.0050	7/10/2008 5:35:29 PM
Lead	0.0005	mg/L	J	0.00020	0.0010	7/10/2008 5:35:29 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:35:29 PM
Nickel	ND	mg/L		0.00200	0.0100	7/10/2008 5:35:29 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:35:29 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:35:29 PM
Strontium	ND	mg/L		0.00100	0.0050	7/10/2008 5:35:29 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:35:29 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:35:29 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:57:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 9:31:10 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.042	0.10	7/12/2008 2:08:32 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-11
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-06A
Collection Date: 7/8/2008 11:44:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/12/2008 2:08:32 AM
Surr: o-Terphenyl	95.9	%REC			30-130	7/12/2008 2:08:32 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Acenaphthylene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Anthracene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Benzidine	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Benzo(a)anthracene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Benzo(a)pyrene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00607	0.0101	7/14/2008 10:03:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00506	0.0101	7/14/2008 10:03:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2-Chloronaphthalene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2-Chlorophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Chrysene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
o-Cresol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
m,p-Cresol	ND	mg/L		0.00506	0.0202	7/14/2008 10:03:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00303	0.0101	7/14/2008 10:03:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Diethyl phthalate	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Dimethyl phthalate	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-11
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-06A
Collection Date: 7/8/2008 11:44:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00506	0.0101	7/14/2008 10:03:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Fluoranthene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Fluorene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Hexachlorobenzene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Hexachlorobutadiene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Hexachloroethane	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Isophorone	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Naphthalene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Nitrobenzene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2-Nitrophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
4-Nitrophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Pentachlorophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Phenanthrene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Phenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Pyrene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00202	0.0101	7/14/2008 10:03:00 PM
Surr: 2-Fluorophenol	48.0	%REC			21-110	7/14/2008 10:03:00 PM
Surr: Phenol-d5	30.4	%REC			10-110	7/14/2008 10:03:00 PM
Surr: 2,4,6-Tribromophenol	98.7	%REC			10-123	7/14/2008 10:03:00 PM
Surr: Nitrobenzene-d5	82.6	%REC			35-114	7/14/2008 10:03:00 PM
Surr: 2-Fluorobiphenyl	85.5	%REC			43-116	7/14/2008 10:03:00 PM
Surr: 4-Terphenyl-d14	74.6	%REC			33-141	7/14/2008 10:03:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 10:03:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-11
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-06A
Collection Date: 7/8/2008 11:44:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 12:27:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 12:27:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 12:27:00 AM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 12:27:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 12:27:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 12:27:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 12:27:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 12:27:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 12:27:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 12:27:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 12:27:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 12:27:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 12:27:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 12:27:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 12:27:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 12:27:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 12:27:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 12:27:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 12:27:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 12:27:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 12:27:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 12:27:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 12:27:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 12:27:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 12:27:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 12:27:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 12:27:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 12:27:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 12:27:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 12:27:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 12:27:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 12:27:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 12:27:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 12:27:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 12:27:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 12:27:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 12:27:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-11
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-06A
Collection Date: 7/8/2008 11:44:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 12:27:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 12:27:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 12:27:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 12:27:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 12:27:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 12:27:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 12:27:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 12:27:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 12:27:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 12:27:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 12:27:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 12:27:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 12:27:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 12:27:00 AM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 12:27:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 12:27:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 12:27:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 12:27:00 AM
Toluene	ND	µg/L		0.17	1.0	7/15/2008 12:27:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 12:27:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 12:27:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 12:27:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 12:27:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 12:27:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 12:27:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 12:27:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 12:27:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 12:27:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 12:27:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 12:27:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 12:27:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 12:27:00 AM
Surr: 1,2-Dichloroethane-d4	103	%REC			80-120	7/15/2008 12:27:00 AM
Surr: 4-Bromofluorobenzene	99.7	%REC			86-115	7/15/2008 12:27:00 AM
Surr: Dibromofluoromethane	118	%REC			80-120	7/15/2008 12:27:00 AM
Surr: Toluene-d8	104	%REC			88-110	7/15/2008 12:27:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 12:27:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807587
Client Sample ID:	PM-11	**Lab ID:**	0807587-06A
Project:	PL-SLURRY	**Collection Date:**	7/8/2008 11:44:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	7/9/2008 8:33:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 8:33:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	12.6	mg/L		0.100	1.00	7/9/2008 7:57:00 PM
Fluoride	0.25	mg/L		0.050	0.20	7/9/2008 7:57:00 PM
Sulfate	2.64	mg/L	J	0.700	5.00	7/9/2008 7:57:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	ND	mg/L		0.030	0.10	7/11/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	394	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	236	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	3	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	10.7	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	190	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	191	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.44	SU		NA	NA	7/10/2008 1:25:00 PM

Key:			
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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-11/FIELD FILTERED
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-06B
Collection Date: 7/8/2008 11:44:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.039	mg/L	J	0.0200	0.100	7/29/2008 10:36:00 PM
Calcium	0.199	mg/L	J	0.100	0.500	7/29/2008 10:36:00 PM
Iron	0.032	mg/L	J	0.0200	0.100	7/29/2008 10:36:00 PM
Magnesium	ND	mg/L		0.400	0.500	7/29/2008 10:36:00 PM
Manganese	0.024	mg/L	J	0.0010	0.050	7/29/2008 10:36:00 PM
Potassium	ND	mg/L		0.300	1.00	7/29/2008 10:36:00 PM
Silicon	6.17	mg/L		0.0100	0.100	7/30/2008 3:58:00 PM
Sodium	103	mg/L		0.100	0.500	7/29/2008 10:36:00 PM
Zinc	0.021	mg/L	J	0.0030	0.050	7/29/2008 10:36:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:41:20 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/10/2008 5:41:20 PM
Barium	0.0056	mg/L		0.00100	0.0050	7/10/2008 5:41:20 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:41:20 PM
Cadmium	0.0002	mg/L	J	0.00020	0.0010	7/10/2008 5:41:20 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 5:41:20 PM
Cobalt	0.0011	mg/L	J	0.00100	0.0050	7/10/2008 5:41:20 PM
Copper	0.0041	mg/L	J	0.00100	0.0050	7/10/2008 5:41:20 PM
Lead	0.0004	mg/L	J	0.00020	0.0010	7/10/2008 5:41:20 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:41:20 PM
Nickel	ND	mg/L		0.00200	0.0100	7/10/2008 5:41:20 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:41:20 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:41:20 PM
Strontium	0.0018	mg/L	J	0.00100	0.0050	7/10/2008 5:41:20 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:41:20 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:41:20 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:58:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-10
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-07A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.157	mg/L		0.0200	0.100	7/29/2008 10:41:00 PM
Calcium	15.7	mg/L		0.100	0.500	7/29/2008 10:41:00 PM
Iron	0.486	mg/L		0.0200	0.100	7/29/2008 10:41:00 PM
Magnesium	5.85	mg/L		0.400	0.500	7/29/2008 10:41:00 PM
Manganese	0.128	mg/L		0.0010	0.050	7/29/2008 10:41:00 PM
Potassium	2.07	mg/L		0.300	1.00	7/29/2008 10:41:00 PM
Silicon	5.38	mg/L		0.0100	0.100	7/30/2008 4:05:00 PM
Sodium	58.7	mg/L		0.100	0.500	7/29/2008 10:41:00 PM
Zinc	0.005	mg/L	J	0.0030	0.050	7/29/2008 10:41:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:47:12 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Barium	0.489	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:47:12 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 5:47:12 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Cobalt	ND	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Copper	ND	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 5:47:12 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Nickel	ND	mg/L		0.00200	0.0100	7/10/2008 5:47:12 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:47:12 PM
Strontium	0.263	mg/L		0.00100	0.0050	7/10/2008 5:47:12 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:47:12 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:47:12 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:59:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 9:43:30 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.042	0.10	7/12/2008 2:42:43 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-10
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-07A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/12/2008 2:42:43 AM
Surr: o-Terphenyl	70.9	%REC			30-130	7/12/2008 2:42:43 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Acenaphthylene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Anthracene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Benzidine	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Benzo(a)anthracene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Benzo(a)pyrene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00609	0.0102	7/14/2008 9:33:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00508	0.0102	7/14/2008 9:33:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2-Chloronaphthalene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2-Chlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Chrysene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
o-Cresol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
m,p-Cresol	ND	mg/L		0.00508	0.0203	7/14/2008 9:33:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00305	0.0102	7/14/2008 9:33:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Diethyl phthalate	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Dimethyl phthalate	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-10
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-07A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00508	0.0102	7/14/2008 9:33:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Fluoranthene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Fluorene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Hexachlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Hexachlorobutadiene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Hexachloroethane	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Isophorone	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Naphthalene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Nitrobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2-Nitrophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
4-Nitrophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Pentachlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Phenanthrene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Phenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Pyrene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00203	0.0102	7/14/2008 9:33:00 PM
Surr: 2-Fluorophenol	46.2	%REC			21-110	7/14/2008 9:33:00 PM
Surr: Phenol-d5	29.2	%REC			10-110	7/14/2008 9:33:00 PM
Surr: 2,4,6-Tribromophenol	92.4	%REC			10-123	7/14/2008 9:33:00 PM
Surr: Nitrobenzene-d5	83.5	%REC			35-114	7/14/2008 9:33:00 PM
Surr: 2-Fluorobiphenyl	84.6	%REC			43-116	7/14/2008 9:33:00 PM
Surr: 4-Terphenyl-d14	74.0	%REC			33-141	7/14/2008 9:33:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 9:33:00 PM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-10
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-07A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 1:00:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 1:00:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 1:00:00 AM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 1:00:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 1:00:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 1:00:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 1:00:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 1:00:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 1:00:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 1:00:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 1:00:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:00:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 1:00:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 1:00:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 1:00:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 1:00:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 1:00:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 1:00:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 1:00:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 1:00:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 1:00:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 1:00:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 1:00:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 1:00:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 1:00:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 1:00:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 1:00:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 1:00:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 1:00:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 1:00:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 1:00:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 1:00:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 1:00:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 1:00:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 1:00:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 1:00:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 1:00:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-10
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-07A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 1:00:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 1:00:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 1:00:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 1:00:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 1:00:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 1:00:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 1:00:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 1:00:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 1:00:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 1:00:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 1:00:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 1:00:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 1:00:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 1:00:00 AM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 1:00:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 1:00:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 1:00:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 1:00:00 AM
Toluene	ND	µg/L		0.17	1.0	7/15/2008 1:00:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 1:00:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 1:00:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 1:00:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 1:00:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 1:00:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 1:00:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 1:00:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:00:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:00:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 1:00:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 1:00:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 1:00:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 1:00:00 AM
Surr: 1,2-Dichloroethane-d4	99.6	%REC			80-120	7/15/2008 1:00:00 AM
Surr: 4-Bromofluorobenzene	102	%REC			86-115	7/15/2008 1:00:00 AM
Surr: Dibromofluoromethane	119	%REC			80-120	7/15/2008 1:00:00 AM
Surr: Toluene-d8	102	%REC			88-110	7/15/2008 1:00:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 1:00:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-10
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-07A
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	7/9/2008 8:51:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 8:51:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	5.64	mg/L		0.100	1.00	7/9/2008 7:57:00 PM
Fluoride	0.25	mg/L		0.050	0.20	7/9/2008 7:57:00 PM
Sulfate	ND	mg/L		0.700	5.00	7/9/2008 7:57:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.59	mg/L		0.030	0.10	7/11/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	336	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	158	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	2	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	5.9	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	176	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	177	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.74	SU		NA	NA	7/10/2008 1:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-10/FIELD FILTERED
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-07B
Collection Date: 7/8/2008 12:40:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.228	mg/L		0.0200	0.100	7/29/2008 10:47:00 PM
Calcium	15.7	mg/L		0.100	0.500	7/29/2008 10:47:00 PM
Iron	0.604	mg/L		0.0200	0.100	7/29/2008 10:47:00 PM
Magnesium	6.13	mg/L		0.400	0.500	7/29/2008 10:47:00 PM
Manganese	0.196	mg/L		0.0010	0.050	7/29/2008 10:47:00 PM
Potassium	2.19	mg/L		0.300	1.00	7/29/2008 10:47:00 PM
Silicon	5.36	mg/L		0.0100	0.100	7/30/2008 4:10:00 PM
Sodium	58.7	mg/L		0.100	0.500	7/29/2008 10:47:00 PM
Zinc	0.025	mg/L	J	0.0030	0.050	7/29/2008 10:47:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:53:04 PM
Arsenic	ND	mg/L		0.00100	0.0050	7/10/2008 5:53:04 PM
Barium	0.443	mg/L		0.00100	0.0050	7/10/2008 5:53:04 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:53:04 PM
Cadmium	0.0013	mg/L		0.00020	0.0010	7/10/2008 5:53:04 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 5:53:04 PM
Cobalt	0.0017	mg/L	J	0.00100	0.0050	7/10/2008 5:53:04 PM
Copper	0.0016	mg/L	J	0.00100	0.0050	7/10/2008 5:53:04 PM
Lead	0.0003	mg/L	J	0.00020	0.0010	7/10/2008 5:53:04 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 5:53:04 PM
Nickel	0.0021	mg/L	J	0.00200	0.0100	7/10/2008 5:53:04 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:53:04 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:53:04 PM
Strontium	0.236	mg/L		0.00100	0.0050	7/10/2008 5:53:04 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:53:04 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 5:53:04 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 3:03:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-1
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-08A
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.371	mg/L		0.0200	0.100	7/29/2008 10:53:00 PM
Calcium	41.6	mg/L		0.100	0.500	7/29/2008 10:53:00 PM
Iron	4.74	mg/L		0.0200	0.100	7/29/2008 10:53:00 PM
Magnesium	19.7	mg/L		0.400	0.500	7/29/2008 10:53:00 PM
Manganese	0.335	mg/L		0.0010	0.050	7/29/2008 10:53:00 PM
Potassium	10.3	mg/L		0.300	1.00	7/29/2008 10:53:00 PM
Silicon	3.78	mg/L		0.0100	0.100	7/30/2008 4:16:00 PM
Sodium	561	mg/L		0.100	0.500	7/29/2008 10:53:00 PM
Zinc	0.009	mg/L	J	0.0030	0.050	7/29/2008 10:53:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 5:58:57 PM
Arsenic	0.0049	mg/L	J	0.00100	0.0050	7/10/2008 5:58:57 PM
Barium	0.0432	mg/L		0.00100	0.0050	7/10/2008 5:58:57 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 5:58:57 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 5:58:57 PM
Chromium	0.0523	mg/L		0.00100	0.0050	7/10/2008 5:58:57 PM
Cobalt	0.0012	mg/L	J	0.00100	0.0050	7/10/2008 5:58:57 PM
Copper	0.0023	mg/L	J	0.00100	0.0050	7/10/2008 5:58:57 PM
Lead	0.0004	mg/L	J	0.00020	0.0010	7/10/2008 5:58:57 PM
Molybdenum	0.0043	mg/L	J	0.00100	0.0050	7/10/2008 5:58:57 PM
Nickel	0.0025	mg/L	J	0.00200	0.0100	7/10/2008 5:58:57 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 5:58:57 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 5:58:57 PM
Strontium	1.26	mg/L		0.00100	0.0050	7/10/2008 5:58:57 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 5:58:57 PM
Vanadium	0.0013	mg/L	J	0.00100	0.0100	7/10/2008 5:58:57 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 3:05:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 9:55:50 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.042	0.10	7/12/2008 3:16:57 AM

Key:

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-1
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-08A
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/12/2008 3:16:57 AM
Surr: o-Terphenyl	92.8	%REC			30-130	7/12/2008 3:16:57 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Acenaphthylene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Benzidine	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Benzo(a)anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Benzo(a)pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00608	0.0101	7/14/2008 9:03:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00506	0.0101	7/14/2008 9:03:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2-Chloronaphthalene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2-Chlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Chrysene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
o-Cresol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
m,p-Cresol	ND	mg/L		0.00506	0.0203	7/14/2008 9:03:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00304	0.0101	7/14/2008 9:03:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Diethyl phthalate	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Dimethyl phthalate	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM

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NA	Not Applicable	E	Estimated Value above quantitation range
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PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-1
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-08A
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00506	0.0101	7/14/2008 9:03:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Fluoranthene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Fluorene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Hexachlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Hexachlorobutadiene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Hexachloroethane	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Isophorone	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Naphthalene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Nitrobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2-Nitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
4-Nitrophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Pentachlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Phenanthrene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Phenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Pyrene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00203	0.0101	7/14/2008 9:03:00 PM
Surr: 2-Fluorophenol	56.8	%REC			21-110	7/14/2008 9:03:00 PM
Surr: Phenol-d5	37.5	%REC			10-110	7/14/2008 9:03:00 PM
Surr: 2,4,6-Tribromophenol	100	%REC			10-123	7/14/2008 9:03:00 PM
Surr: Nitrobenzene-d5	93.2	%REC			35-114	7/14/2008 9:03:00 PM
Surr: 2-Fluorobiphenyl	94.6	%REC			43-116	7/14/2008 9:03:00 PM
Surr: 4-Terphenyl-d14	82.2	%REC			33-141	7/14/2008 9:03:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 9:03:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-1
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-08A
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 1:33:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 1:33:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 1:33:00 AM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 1:33:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 1:33:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 1:33:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 1:33:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 1:33:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 1:33:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 1:33:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 1:33:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:33:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 1:33:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 1:33:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 1:33:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 1:33:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 1:33:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 1:33:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 1:33:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 1:33:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 1:33:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 1:33:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 1:33:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 1:33:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 1:33:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 1:33:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 1:33:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 1:33:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 1:33:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 1:33:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 1:33:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 1:33:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 1:33:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 1:33:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 1:33:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 1:33:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 1:33:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-1
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-08A
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 1:33:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 1:33:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 1:33:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 1:33:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 1:33:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 1:33:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 1:33:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 1:33:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 1:33:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 1:33:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 1:33:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 1:33:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 1:33:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 1:33:00 AM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 1:33:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 1:33:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 1:33:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 1:33:00 AM
Toluene	ND	µg/L		0.17	1.0	7/15/2008 1:33:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 1:33:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 1:33:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 1:33:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 1:33:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 1:33:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 1:33:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 1:33:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:33:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:33:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 1:33:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 1:33:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 1:33:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 1:33:00 AM
Surr: 1,2-Dichloroethane-d4	104	%REC			80-120	7/15/2008 1:33:00 AM
Surr: 4-Bromofluorobenzene	102	%REC			86-115	7/15/2008 1:33:00 AM
Surr: Dibromofluoromethane	114	%REC			80-120	7/15/2008 1:33:00 AM
Surr: Toluene-d8	98.3	%REC			88-110	7/15/2008 1:33:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 1:33:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-1
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-08A
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	7/9/2008 9:09:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 9:09:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	45.0	mg/L		0.100	1.00	7/9/2008 7:57:00 PM
Fluoride	0.42	mg/L		0.050	0.20	7/9/2008 7:57:00 PM
Sulfate	733	mg/L		0.700	5.00	7/9/2008 7:57:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	7.41	mg/L		0.030	0.10	7/14/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	2,860	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,670	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	24	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	50.3	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	569	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	2.6	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	572	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.68	SU		NA	NA	7/10/2008 1:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-1/FIELD FILTERED
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-08B
Collection Date: 7/8/2008 1:00:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.325	mg/L		0.0200	0.100	7/29/2008 10:59:00 PM
Calcium	41.3	mg/L		0.100	0.500	7/29/2008 10:59:00 PM
Iron	3.70	mg/L		0.0200	0.100	7/29/2008 10:59:00 PM
Magnesium	19.0	mg/L		0.400	0.500	7/29/2008 10:59:00 PM
Manganese	0.325	mg/L		0.0010	0.050	7/29/2008 10:59:00 PM
Potassium	9.93	mg/L		0.300	1.00	7/29/2008 10:59:00 PM
Silicon	3.76	mg/L		0.0100	0.100	7/30/2008 4:40:00 PM
Sodium	537	mg/L		0.100	0.500	7/29/2008 10:59:00 PM
Zinc	0.026	mg/L	J	0.0030	0.050	7/29/2008 10:59:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 6:04:50 PM
Arsenic	0.0034	mg/L	J	0.00100	0.0050	7/10/2008 6:04:50 PM
Barium	0.0355	mg/L		0.00100	0.0050	7/10/2008 6:04:50 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 6:04:50 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 6:04:50 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 6:04:50 PM
Cobalt	0.0013	mg/L	J	0.00100	0.0050	7/10/2008 6:04:50 PM
Copper	0.0019	mg/L	J	0.00100	0.0050	7/10/2008 6:04:50 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 6:04:50 PM
Molybdenum	0.0039	mg/L	J	0.00100	0.0050	7/10/2008 6:04:50 PM
Nickel	0.0027	mg/L	J	0.00200	0.0100	7/10/2008 6:04:50 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 6:04:50 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 6:04:50 PM
Strontium	1.13	mg/L		0.00100	0.0050	7/10/2008 6:04:50 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 6:04:50 PM
Vanadium	0.0012	mg/L	J	0.00100	0.0100	7/10/2008 6:04:50 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 3:06:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-2
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-09A
Collection Date: 7/8/2008 12:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.396	mg/L		0.0200	0.100	7/29/2008 11:05:00 PM
Calcium	42.8	mg/L		0.100	0.500	7/29/2008 11:05:00 PM
Iron	4.82	mg/L		0.0200	0.100	7/29/2008 11:05:00 PM
Magnesium	20.1	mg/L		0.400	0.500	7/29/2008 11:05:00 PM
Manganese	0.352	mg/L		0.0010	0.050	7/29/2008 11:05:00 PM
Potassium	10.4	mg/L		0.300	1.00	7/29/2008 11:05:00 PM
Silicon	5.62	mg/L		0.0100	0.100	7/30/2008 4:45:00 PM
Sodium	573	mg/L		0.100	0.500	7/29/2008 11:05:00 PM
Zinc	0.015	mg/L	J	0.0030	0.050	7/29/2008 11:05:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 6:10:43 PM
Arsenic	0.0039	mg/L	J	0.00100	0.0050	7/10/2008 6:10:43 PM
Barium	0.0471	mg/L		0.00100	0.0050	7/10/2008 6:10:43 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 6:10:43 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 6:10:43 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 6:10:43 PM
Cobalt	0.0015	mg/L	J	0.00100	0.0050	7/10/2008 6:10:43 PM
Copper	0.0020	mg/L	J	0.00100	0.0050	7/10/2008 6:10:43 PM
Lead	0.0007	mg/L	J	0.00020	0.0010	7/10/2008 6:10:43 PM
Molybdenum	0.0040	mg/L	J	0.00100	0.0050	7/10/2008 6:10:43 PM
Nickel	0.0030	mg/L	J	0.00200	0.0100	7/10/2008 6:10:43 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 6:10:43 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 6:10:43 PM
Strontium	1.24	mg/L		0.00100	0.0050	7/10/2008 6:10:43 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 6:10:43 PM
Vanadium	0.0015	mg/L	J	0.00100	0.0100	7/10/2008 6:10:43 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 3:07:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 10:08:10 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.042	0.10	7/12/2008 3:51:08 AM

Key:				
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	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-2
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-09A
Collection Date: 7/8/2008 12:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/12/2008 3:51:08 AM
Surr: o-Terphenyl	98.2	%REC			30-130	7/12/2008 3:51:08 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Acenaphthylene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Anthracene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Benzidine	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Benzo(a)anthracene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Benzo(a)pyrene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00618	0.0103	7/14/2008 8:33:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00515	0.0103	7/14/2008 8:33:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2-Chloronaphthalene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2-Chlorophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Chrysene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
o-Cresol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
m,p-Cresol	ND	mg/L		0.00515	0.0206	7/14/2008 8:33:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00309	0.0103	7/14/2008 8:33:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Diethyl phthalate	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Dimethyl phthalate	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-2
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-09A
Collection Date: 7/8/2008 12:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00515	0.0103	7/14/2008 8:33:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Fluoranthene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Fluorene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Hexachlorobenzene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Hexachlorobutadiene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Hexachloroethane	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Isophorone	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Naphthalene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Nitrobenzene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2-Nitrophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
4-Nitrophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Pentachlorophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Phenanthrene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Phenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Pyrene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00206	0.0103	7/14/2008 8:33:00 PM
Surr: 2-Fluorophenol	53.3	%REC			21-110	7/14/2008 8:33:00 PM
Surr: Phenol-d5	34.7	%REC			10-110	7/14/2008 8:33:00 PM
Surr: 2,4,6-Tribromophenol	101	%REC			10-123	7/14/2008 8:33:00 PM
Surr: Nitrobenzene-d5	91.8	%REC			35-114	7/14/2008 8:33:00 PM
Surr: 2-Fluorobiphenyl	92.9	%REC			43-116	7/14/2008 8:33:00 PM
Surr: 4-Terphenyl-d14	80.1	%REC			33-141	7/14/2008 8:33:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 8:33:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-2
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-09A
Collection Date: 7/8/2008 12:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 2:05:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 2:05:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 2:05:00 AM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 2:05:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 2:05:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 2:05:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 2:05:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 2:05:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 2:05:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 2:05:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 2:05:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 2:05:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 2:05:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 2:05:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 2:05:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 2:05:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 2:05:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 2:05:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 2:05:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 2:05:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 2:05:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 2:05:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 2:05:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 2:05:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 2:05:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 2:05:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 2:05:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 2:05:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 2:05:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 2:05:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 2:05:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 2:05:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 2:05:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 2:05:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 2:05:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 2:05:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 2:05:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-2
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-09A
Collection Date: 7/8/2008 12:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 2:05:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 2:05:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 2:05:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 2:05:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 2:05:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 2:05:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 2:05:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 2:05:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 2:05:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 2:05:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 2:05:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 2:05:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 2:05:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 2:05:00 AM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 2:05:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 2:05:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 2:05:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 2:05:00 AM
Toluene	ND	µg/L		0.17	1.0	7/15/2008 2:05:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 2:05:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 2:05:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 2:05:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 2:05:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 2:05:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 2:05:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 2:05:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 2:05:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 2:05:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 2:05:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 2:05:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 2:05:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 2:05:00 AM
Surr: 1,2-Dichloroethane-d4	107	%REC			80-120	7/15/2008 2:05:00 AM
Surr: 4-Bromofluorobenzene	103	%REC			86-115	7/15/2008 2:05:00 AM
Surr: Dibromofluoromethane	112	%REC			80-120	7/15/2008 2:05:00 AM
Surr: Toluene-d8	103	%REC			88-110	7/15/2008 2:05:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 2:05:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-2
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-09A
Collection Date: 7/8/2008 12:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/11/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	7/9/2008 9:27:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 9:27:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	46.8	mg/L		0.100	1.00	7/9/2008 7:57:00 PM
Fluoride	0.40	mg/L		0.050	0.20	7/9/2008 7:57:00 PM
Sulfate	752	mg/L		0.700	5.00	7/9/2008 7:57:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	7.44	mg/L		0.030	0.10	7/14/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	2,810	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,540	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	36	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	70.1	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	566	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	1.9	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	568	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.56	SU		NA	NA	7/10/2008 1:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-2/FIELD FILTERED
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-09B
Collection Date: 7/8/2008 12:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.407	mg/L		0.0200	0.100	7/29/2008 11:11:00 PM
Calcium	40.3	mg/L		0.100	0.500	7/29/2008 11:11:00 PM
Iron	3.06	mg/L		0.0200	0.100	7/29/2008 11:11:00 PM
Magnesium	19.5	mg/L		0.400	0.500	7/29/2008 11:11:00 PM
Manganese	0.559	mg/L		0.0010	0.050	7/29/2008 11:11:00 PM
Potassium	9.67	mg/L		0.300	1.00	7/29/2008 11:11:00 PM
Silicon	3.77	mg/L		0.0100	0.100	7/30/2008 4:49:00 PM
Sodium	536	mg/L		0.100	0.500	7/29/2008 11:11:00 PM
Zinc	0.133	mg/L		0.0030	0.050	7/29/2008 11:11:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 6:16:36 PM
Arsenic	0.0031	mg/L	J	0.00100	0.0050	7/10/2008 6:16:36 PM
Barium	0.0330	mg/L		0.00100	0.0050	7/10/2008 6:16:36 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 6:16:36 PM
Cadmium	0.0002	mg/L	J	0.00020	0.0010	7/10/2008 6:16:36 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 6:16:36 PM
Cobalt	0.0038	mg/L	J	0.00100	0.0050	7/10/2008 6:16:36 PM
Copper	0.0024	mg/L	J	0.00100	0.0050	7/10/2008 6:16:36 PM
Lead	0.0010	mg/L	J	0.00020	0.0010	7/10/2008 6:16:36 PM
Molybdenum	0.0035	mg/L	J	0.00100	0.0050	7/10/2008 6:16:36 PM
Nickel	0.0060	mg/L	J	0.00200	0.0100	7/10/2008 6:16:36 PM
Selenium	ND	mg/L		0.00100	0.0050	7/10/2008 6:16:36 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 6:16:36 PM
Strontium	1.05	mg/L		0.00100	0.0050	7/10/2008 6:16:36 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 6:16:36 PM
Vanadium	0.0012	mg/L	J	0.00100	0.0100	7/10/2008 6:16:36 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 3:09:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-7
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-10A
Collection Date: 7/8/2008 2:50:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.458	mg/L		0.0200	0.100	7/29/2008 11:16:00 PM
Calcium	193	mg/L		0.100	0.500	7/29/2008 11:16:00 PM
Iron	0.077	mg/L	J	0.0200	0.100	7/29/2008 11:16:00 PM
Magnesium	148	mg/L		0.400	0.500	7/29/2008 11:16:00 PM
Manganese	0.255	mg/L		0.0010	0.050	7/29/2008 11:16:00 PM
Potassium	14.2	mg/L		0.300	1.00	7/29/2008 11:16:00 PM
Silicon	2.44	mg/L		0.0100	0.100	7/30/2008 4:54:00 PM
Sodium	49.3	mg/L		0.100	0.500	7/29/2008 11:16:00 PM
Zinc	0.005	mg/L	J	0.0030	0.050	7/29/2008 11:16:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 6:40:02 PM
Arsenic	0.0015	mg/L	J	0.00100	0.0050	7/10/2008 6:40:02 PM
Barium	0.0472	mg/L		0.00100	0.0050	7/10/2008 6:40:02 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 6:40:02 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 6:40:02 PM
Chromium	0.0010	mg/L	J	0.00100	0.0050	7/10/2008 6:40:02 PM
Cobalt	0.0019	mg/L	J	0.00100	0.0050	7/10/2008 6:40:02 PM
Copper	0.0023	mg/L	J	0.00100	0.0050	7/10/2008 6:40:02 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 6:40:02 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 6:40:02 PM
Nickel	0.0123	mg/L		0.00200	0.0100	7/10/2008 6:40:02 PM
Selenium	0.0051	mg/L		0.00100	0.0050	7/10/2008 6:40:02 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 6:40:02 PM
Strontium	1.03	mg/L		0.00100	0.0050	7/10/2008 6:40:02 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 6:40:02 PM
Vanadium	ND	mg/L		0.00100	0.0100	7/10/2008 6:40:02 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 3:10:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 10:20:26 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.043	0.10	7/12/2008 4:25:23 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-7
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-10A
Collection Date: 7/8/2008 2:50:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/12/2008 4:25:23 AM
Surr: o-Terphenyl	89.3	%REC			30-130	7/12/2008 4:25:23 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Acenaphthylene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Anthracene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Benzidine	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Benzo(a)anthracene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Benzo(a)pyrene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00622	0.0104	7/14/2008 8:03:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00518	0.0104	7/14/2008 8:03:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2-Chloronaphthalene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2-Chlorophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Chrysene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
o-Cresol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
m,p-Cresol	ND	mg/L		0.00518	0.0207	7/14/2008 8:03:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00311	0.0104	7/14/2008 8:03:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Diethyl phthalate	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Dimethyl phthalate	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-7
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-10A
Collection Date: 7/8/2008 2:50:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00518	0.0104	7/14/2008 8:03:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Fluoranthene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Fluorene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Hexachlorobenzene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Hexachlorobutadiene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Hexachloroethane	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Isophorone	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Naphthalene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Nitrobenzene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2-Nitrophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
4-Nitrophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Pentachlorophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Phenanthrene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Phenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Pyrene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00207	0.0104	7/14/2008 8:03:00 PM
Surr: 2-Fluorophenol	51.4	%REC			21-110	7/14/2008 8:03:00 PM
Surr: Phenol-d5	34.8	%REC			10-110	7/14/2008 8:03:00 PM
Surr: 2,4,6-Tribromophenol	98.0	%REC			10-123	7/14/2008 8:03:00 PM
Surr: Nitrobenzene-d5	92.4	%REC			35-114	7/14/2008 8:03:00 PM
Surr: 2-Fluorobiphenyl	91.1	%REC			43-116	7/14/2008 8:03:00 PM
Surr: 4-Terphenyl-d14	79.6	%REC			33-141	7/14/2008 8:03:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 8:03:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-7
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-10A
Collection Date: 7/8/2008 2:50:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 2:38:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 2:38:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 2:38:00 AM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 2:38:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 2:38:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 2:38:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 2:38:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 2:38:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 2:38:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 2:38:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 2:38:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 2:38:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 2:38:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 2:38:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 2:38:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 2:38:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 2:38:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 2:38:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 2:38:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 2:38:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 2:38:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 2:38:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 2:38:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 2:38:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 2:38:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 2:38:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 2:38:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 2:38:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 2:38:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 2:38:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 2:38:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 2:38:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 2:38:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 2:38:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 2:38:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 2:38:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 2:38:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-7
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-10A
Collection Date: 7/8/2008 2:50:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 2:38:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 2:38:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 2:38:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 2:38:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 2:38:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 2:38:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 2:38:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 2:38:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 2:38:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 2:38:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 2:38:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 2:38:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 2:38:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 2:38:00 AM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 2:38:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 2:38:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 2:38:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 2:38:00 AM
Toluene	ND	µg/L		0.17	1.0	7/15/2008 2:38:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 2:38:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 2:38:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 2:38:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 2:38:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 2:38:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 2:38:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 2:38:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 2:38:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 2:38:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 2:38:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 2:38:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 2:38:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 2:38:00 AM
Surr: 1,2-Dichloroethane-d4	97.0	%REC			80-120	7/15/2008 2:38:00 AM
Surr: 4-Bromofluorobenzene	99.4	%REC			86-115	7/15/2008 2:38:00 AM
Surr: Dibromofluoromethane	116	%REC			80-120	7/15/2008 2:38:00 AM
Surr: Toluene-d8	99.8	%REC			88-110	7/15/2008 2:38:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 2:38:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-7
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-10A
Collection Date: 7/8/2008 2:50:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/11/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	2.40	mg/L		0.050	0.10	7/9/2008 9:45:00 PM
Nitrogen, Nitrite	0.05	mg/L	J	0.050	0.50	7/9/2008 9:45:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	10.4	mg/L		0.100	1.00	7/9/2008 7:57:00 PM
Fluoride	0.12	mg/L	J	0.050	0.20	7/9/2008 7:57:00 PM
Sulfate	1,220	mg/L		0.700	5.00	7/9/2008 7:57:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.55	mg/L		0.030	0.10	7/11/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	2,240	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,820	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	3.3	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	86.9	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	87.7	mg/L		1.00	1.0	7/10/2008 1:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.96	SU		NA	NA	7/10/2008 1:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-7/FIELD FILTERED
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-10B
Collection Date: 7/8/2008 2:50:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.467	mg/L		0.0200	0.100	7/29/2008 11:45:00 PM
Calcium	190	mg/L		0.100	0.500	7/29/2008 11:45:00 PM
Iron	0.161	mg/L		0.0200	0.100	7/29/2008 11:45:00 PM
Magnesium	145	mg/L		0.400	0.500	7/29/2008 11:45:00 PM
Manganese	0.263	mg/L		0.0010	0.050	7/29/2008 11:45:00 PM
Potassium	13.5	mg/L		0.300	1.00	7/29/2008 11:45:00 PM
Silicon	2.36	mg/L		0.0100	0.100	7/30/2008 5:13:00 PM
Sodium	47.5	mg/L		0.100	0.500	7/29/2008 11:45:00 PM
Zinc	0.007	mg/L	J	0.0030	0.050	7/29/2008 11:45:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	ND	mg/L		0.00020	0.0010	7/10/2008 6:57:37 PM
Arsenic	0.0011	mg/L	J	0.00100	0.0050	7/10/2008 6:57:37 PM
Barium	0.0479	mg/L		0.00100	0.0050	7/10/2008 6:57:37 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 6:57:37 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 6:57:37 PM
Chromium	ND	mg/L		0.00100	0.0050	7/10/2008 6:57:37 PM
Cobalt	0.0021	mg/L	J	0.00100	0.0050	7/10/2008 6:57:37 PM
Copper	0.0028	mg/L	J	0.00100	0.0050	7/10/2008 6:57:37 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 6:57:37 PM
Molybdenum	ND	mg/L		0.00100	0.0050	7/10/2008 6:57:37 PM
Nickel	0.0130	mg/L		0.00200	0.0100	7/10/2008 6:57:37 PM
Selenium	0.0050	mg/L	J	0.00100	0.0050	7/10/2008 6:57:37 PM
Silver	0.0007	mg/L	J	0.00020	0.0050	7/10/2008 6:57:37 PM
Strontium	1.05	mg/L		0.00100	0.0050	7/10/2008 6:57:37 PM
Thallium	ND	mg/L		0.00020	0.0010	7/10/2008 6:57:37 PM
Vanadium	0.0010	mg/L	J	0.00100	0.0100	7/10/2008 6:57:37 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 3:14:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-8
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-11A
Collection Date: 7/8/2008 2:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.482	mg/L		0.0200	0.100	7/30/2008 12:56:00 AM
Calcium	128	mg/L		0.100	0.500	7/30/2008 12:56:00 AM
Iron	0.114	mg/L		0.0200	0.100	7/30/2008 12:56:00 AM
Magnesium	80.1	mg/L		0.400	0.500	7/30/2008 12:56:00 AM
Manganese	2.21	mg/L		0.0010	0.050	7/30/2008 12:56:00 AM
Potassium	15.7	mg/L		0.300	1.00	7/30/2008 12:56:00 AM
Silicon	2.35	mg/L		0.0100	0.100	7/30/2008 6:55:00 PM
Sodium	145	mg/L		0.100	0.500	7/30/2008 12:56:00 AM
Zinc	0.021	mg/L	J	0.0030	0.050	7/30/2008 12:56:00 AM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0002	mg/L	J	0.00020	0.0010	7/10/2008 3:32:29 PM
Arsenic	0.0014	mg/L	J	0.00100	0.0050	7/10/2008 3:32:29 PM
Barium	0.0524	mg/L		0.00100	0.0050	7/10/2008 3:32:29 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 3:32:29 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 3:32:29 PM
Chromium	0.0011	mg/L	J	0.00100	0.0050	7/10/2008 3:32:29 PM
Cobalt	0.0088	mg/L		0.00100	0.0050	7/10/2008 3:32:29 PM
Copper	0.0020	mg/L	J	0.00100	0.0050	7/10/2008 3:32:29 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 3:32:29 PM
Molybdenum	0.0013	mg/L	J	0.00100	0.0050	7/10/2008 3:32:29 PM
Nickel	0.0219	mg/L		0.00200	0.0100	7/10/2008 3:32:29 PM
Selenium	0.0080	mg/L		0.00100	0.0050	7/10/2008 3:32:29 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 3:32:29 PM
Strontium	1.17	mg/L		0.00100	0.0050	7/10/2008 3:32:29 PM
Thallium	0.0004	mg/L	J	0.00020	0.0010	7/10/2008 3:32:29 PM
Vanadium	0.0015	mg/L	J	0.00100	0.0100	7/10/2008 3:32:29 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:07:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/21/2008 10:32:42 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.042	0.10	7/12/2008 4:59:37 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-8
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-11A
Collection Date: 7/8/2008 2:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.022	0.26	7/12/2008 4:59:37 AM
Surr: o-Terphenyl	92.6	%REC			30-130	7/12/2008 4:59:37 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Acenaphthylene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Anthracene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Benzidine	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Benzo(a)anthracene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Benzo(a)pyrene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00625	0.0104	7/14/2008 7:33:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00521	0.0104	7/14/2008 7:33:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2-Chloronaphthalene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2-Chlorophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Chrysene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
o-Cresol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
m,p-Cresol	ND	mg/L		0.00521	0.0208	7/14/2008 7:33:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00312	0.0104	7/14/2008 7:33:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Diethyl phthalate	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Dimethyl phthalate	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-8
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-11A
Collection Date: 7/8/2008 2:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dimethylphenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00521	0.0104	7/14/2008 7:33:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Fluoranthene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Fluorene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Hexachlorobenzene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Hexachlorobutadiene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Hexachloroethane	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Isophorone	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Naphthalene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Nitrobenzene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2-Nitrophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
4-Nitrophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Pentachlorophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Phenanthrene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Phenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Pyrene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00208	0.0104	7/14/2008 7:33:00 PM
Surr: 2-Fluorophenol	55.6	%REC			21-110	7/14/2008 7:33:00 PM
Surr: Phenol-d5	37.9	%REC			10-110	7/14/2008 7:33:00 PM
Surr: 2,4,6-Tribromophenol	93.7	%REC			10-123	7/14/2008 7:33:00 PM
Surr: Nitrobenzene-d5	92.1	%REC			35-114	7/14/2008 7:33:00 PM
Surr: 2-Fluorobiphenyl	94.9	%REC			43-116	7/14/2008 7:33:00 PM
Surr: 4-Terphenyl-d14	82.2	%REC			33-141	7/14/2008 7:33:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/14/2008 7:33:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-8
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-11A
Collection Date: 7/8/2008 2:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 3:11:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 3:11:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 3:11:00 AM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 3:11:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 3:11:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 3:11:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 3:11:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 3:11:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 3:11:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 3:11:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 3:11:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 3:11:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 3:11:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 3:11:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 3:11:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 3:11:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 3:11:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 3:11:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 3:11:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 3:11:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 3:11:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 3:11:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 3:11:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 3:11:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 3:11:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 3:11:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 3:11:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 3:11:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 3:11:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 3:11:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 3:11:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 3:11:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 3:11:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 3:11:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 3:11:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 3:11:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 3:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-8
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-11A
Collection Date: 7/8/2008 2:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 3:11:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 3:11:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 3:11:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 3:11:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 3:11:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 3:11:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 3:11:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 3:11:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 3:11:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 3:11:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 3:11:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 3:11:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 3:11:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 3:11:00 AM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 3:11:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 3:11:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 3:11:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 3:11:00 AM
Toluene	ND	µg/L		0.17	1.0	7/15/2008 3:11:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 3:11:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 3:11:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 3:11:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 3:11:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 3:11:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 3:11:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 3:11:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 3:11:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 3:11:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 3:11:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 3:11:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 3:11:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 3:11:00 AM
Surr: 1,2-Dichloroethane-d4	105	%REC			80-120	7/15/2008 3:11:00 AM
Surr: 4-Bromofluorobenzene	99.4	%REC			86-115	7/15/2008 3:11:00 AM
Surr: Dibromofluoromethane	121	%REC	S		80-120	7/15/2008 3:11:00 AM
Surr: Toluene-d8	101	%REC			88-110	7/15/2008 3:11:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 3:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-8
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-11A
Collection Date: 7/8/2008 2:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/11/2008 11:50:00 AM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	2.23	mg/L		0.050	0.10	7/9/2008 10:03:00 PM
Nitrogen, Nitrite	0.37	mg/L	J	0.050	0.50	7/9/2008 10:03:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	19.4	mg/L		0.100	1.00	7/9/2008 7:57:00 PM
Fluoride	0.18	mg/L	J	0.050	0.20	7/9/2008 7:57:00 PM
Sulfate	777	mg/L		0.700	5.00	7/9/2008 7:57:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	7.78	mg/L		0.030	0.10	7/14/2008 9:30:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	1,820	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,380	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	5	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	62.8	mg/L		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	1.0	mg/L		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	63.9	mg/L		1.00	1.0	7/11/2008 4:25:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	8.23	SU		NA	NA	7/11/2008 4:25:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-8/FIELD FILTERED
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-11B
Collection Date: 7/8/2008 2:30:00 PM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.453	mg/L		0.0200	0.100	7/30/2008 1:01:00 AM
Calcium	127	mg/L		0.100	0.500	7/30/2008 1:01:00 AM
Iron	0.023	mg/L	J	0.0200	0.100	7/30/2008 1:01:00 AM
Magnesium	79.7	mg/L		0.400	0.500	7/30/2008 1:01:00 AM
Manganese	2.07	mg/L		0.0010	0.050	7/30/2008 1:01:00 AM
Potassium	15.6	mg/L		0.300	1.00	7/30/2008 1:01:00 AM
Silicon	2.75	mg/L		0.0100	0.100	7/30/2008 7:00:00 PM
Sodium	144	mg/L		0.100	0.500	7/30/2008 1:01:00 AM
Zinc	0.019	mg/L	J	0.0030	0.050	7/30/2008 1:01:00 AM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0002	mg/L	J	0.00020	0.0010	7/10/2008 3:38:21 PM
Arsenic	0.0014	mg/L	J	0.00100	0.0050	7/10/2008 3:38:21 PM
Barium	0.0524	mg/L		0.00100	0.0050	7/10/2008 3:38:21 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/10/2008 3:38:21 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/10/2008 3:38:21 PM
Chromium	0.0022	mg/L	J	0.00100	0.0050	7/10/2008 3:38:21 PM
Cobalt	0.0081	mg/L		0.00100	0.0050	7/10/2008 3:38:21 PM
Copper	0.0018	mg/L	J	0.00100	0.0050	7/10/2008 3:38:21 PM
Lead	ND	mg/L		0.00020	0.0010	7/10/2008 3:38:21 PM
Molybdenum	0.0013	mg/L	J	0.00100	0.0050	7/10/2008 3:38:21 PM
Nickel	0.0202	mg/L		0.00200	0.0100	7/10/2008 3:38:21 PM
Selenium	0.0084	mg/L		0.00100	0.0050	7/10/2008 3:38:21 PM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/10/2008 3:38:21 PM
Strontium	1.18	mg/L		0.00100	0.0050	7/10/2008 3:38:21 PM
Thallium	0.0004	mg/L	J	0.00020	0.0010	7/10/2008 3:38:21 PM
Vanadium	0.0012	mg/L	J	0.00100	0.0100	7/10/2008 3:38:21 PM

NOTES:
The CCV for Be exceeded REIC control limits indicating a high bias. Since the analyte result was ND, this exceedance does not adversely impac data usability.

MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:09:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: TRIP BLANK
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-12A
Collection Date: 7/8/2008
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 3:44:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 3:44:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 3:44:00 AM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 3:44:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 3:44:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 3:44:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 3:44:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 3:44:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 3:44:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 3:44:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 3:44:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 3:44:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 3:44:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 3:44:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 3:44:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 3:44:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 3:44:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 3:44:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 3:44:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 3:44:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 3:44:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 3:44:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 3:44:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 3:44:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 3:44:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 3:44:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 3:44:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 3:44:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 3:44:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 3:44:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 3:44:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 3:44:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 3:44:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 3:44:00 AM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 3:44:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 3:44:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 3:44:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: TRIP BLANK
Project: PL-SLURRY
Site ID:

WorkOrder: 0807587
Lab ID: 0807587-12A
Collection Date: 7/8/2008
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 3:44:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 3:44:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 3:44:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 3:44:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 3:44:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 3:44:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 3:44:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 3:44:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 3:44:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 3:44:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 3:44:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 3:44:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 3:44:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 3:44:00 AM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 3:44:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 3:44:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 3:44:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 3:44:00 AM
Toluene	ND	µg/L		0.17	1.0	7/15/2008 3:44:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 3:44:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 3:44:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 3:44:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 3:44:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 3:44:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 3:44:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 3:44:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 3:44:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 3:44:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 3:44:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 3:44:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 3:44:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 3:44:00 AM
Surr: 1,2-Dichloroethane-d4	105	%REC			80-120	7/15/2008 3:44:00 AM
Surr: 4-Bromofluorobenzene	99.4	%REC			86-115	7/15/2008 3:44:00 AM
Surr: Dibromofluoromethane	120	%REC	S		80-120	7/15/2008 3:44:00 AM
Surr: Toluene-d8	100	%REC			88-110	7/15/2008 3:44:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 3:44:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

April 20, 2009

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: PL SLURRY

Order No.: 0807583

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 2 sample(s) on 7/9/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason Clark
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0807583**
Date: **4/20/2009**

CLIENT: WV DEP - CHARLESTON
Project: PL SLURRY

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

If you have any questions please contact the project manager whose name is listed above.

The results for the DRO (SGT) samples are:

0807583-01A - 0.21

0807583-01S - 194

0807583-02A - 956

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0807583**
Date: **4/20/2009**

CLIENT: WV DEP - CHARLESTON
Project: PL SLURRY
0807583-02L - ND

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-LIQUID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.564	mg/L		0.0200	0.100	7/22/2008 6:41:00 PM
Calcium	123	mg/L		0.100	0.500	7/22/2008 6:41:00 PM
Iron	0.195	mg/L		0.0200	0.100	7/22/2008 6:41:00 PM
Magnesium	82.2	mg/L		0.400	0.500	7/22/2008 6:41:00 PM
Manganese	0.921	mg/L		0.0010	0.050	7/22/2008 6:41:00 PM
Potassium	15.5	mg/L		0.300	1.00	7/22/2008 6:41:00 PM
Silicon	5.31	mg/L		0.0100	0.100	8/5/2008 8:32:00 AM
Sodium	237	mg/L		0.100	0.500	7/22/2008 6:41:00 PM
Zinc	0.041	mg/L	J	0.0030	0.050	7/22/2008 6:41:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0005	mg/L	J	0.00020	0.0010	7/11/2008 10:08:12 AM
Arsenic	ND	mg/L		0.00100	0.0050	7/11/2008 10:08:12 AM
Barium	0.0634	mg/L		0.00100	0.0050	7/11/2008 10:08:12 AM
Beryllium	ND	mg/L		0.00020	0.0010	7/11/2008 10:08:12 AM
Cadmium	ND	mg/L		0.00020	0.0010	7/11/2008 10:08:12 AM
Chromium	ND	mg/L		0.00100	0.0050	7/11/2008 10:08:12 AM
Cobalt	0.0039	mg/L	J	0.00100	0.0050	7/11/2008 10:08:12 AM
Copper	0.0016	mg/L	J	0.00100	0.0050	7/11/2008 10:08:12 AM
Lead	0.0004	mg/L	J	0.00020	0.0010	7/11/2008 10:08:12 AM
Molybdenum	0.0024	mg/L	J	0.00100	0.0050	7/11/2008 10:08:12 AM
Nickel	0.0096	mg/L	J	0.00200	0.0100	7/11/2008 10:08:12 AM
Selenium	0.0059	mg/L		0.00100	0.0050	7/11/2008 10:08:12 AM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/11/2008 10:08:12 AM
Strontium	1.74	mg/L		0.00100	0.0050	7/11/2008 10:08:12 AM
Thallium	0.0003	mg/L	J	0.00020	0.0010	7/11/2008 10:08:12 AM
Vanadium	ND	mg/L		0.00100	0.0100	7/11/2008 10:08:12 AM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:05:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/16/2008 11:26:04 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	0.26	mg/L		0.045	0.11	7/12/2008 4:59:37 AM
TPH (Oil Range)	ND	mg/L		0.023	0.27	7/12/2008 4:59:37 AM
Surr: o-Terphenyl	112	%REC			30-130	7/12/2008 4:59:37 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-LIQUID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		100	100	7/21/2008
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
Triethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Acenaphthylene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Anthracene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Benzidine	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Benzo(a)anthracene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Benzo(a)pyrene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Benzo(b)fluoranthene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Benzo(g,h,i)perylene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Benzo(k)fluoranthene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Bis(2-chloroethyl)ether	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00853	0.0142	7/15/2008 1:00:00 AM
4-Bromophenyl phenyl ether	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Butyl benzyl phthalate	ND	mg/L		0.00711	0.0142	7/15/2008 1:00:00 AM
4-Chloro-3-methylphenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2-Chloronaphthalene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2-Chlorophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Chrysene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
o-Cresol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
m,p-Cresol	ND	mg/L		0.00711	0.0284	7/15/2008 1:00:00 AM
Dibenzo(a,h)anthracene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Di-n-butyl phthalate	ND	mg/L		0.00426	0.0142	7/15/2008 1:00:00 AM
1,2-Dichlorobenzene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
1,3-Dichlorobenzene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
1,4-Dichlorobenzene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
3,3'-Dichlorobenzidine	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2,4-Dichlorophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Diethyl phthalate	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Dimethyl phthalate	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2,4-Dimethylphenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-LIQUID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2,4-Dinitrophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2,4-Dinitrotoluene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2,6-Dinitrotoluene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Di-n-octyl phthalate	ND	mg/L		0.00711	0.0142	7/15/2008 1:00:00 AM
1,2-Diphenylhydrazine	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Fluoranthene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Fluorene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Hexachlorobenzene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Hexachlorobutadiene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Hexachlorocyclopentadiene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Hexachloroethane	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Isophorone	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Naphthalene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Nitrobenzene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2-Nitrophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
4-Nitrophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
N-Nitrosodimethylamine	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
N-Nitrosodiphenylamine	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Pentachlorophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Phenanthrene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Phenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Pyrene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
1,2,4-Trichlorobenzene	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2,4,5-Trichlorophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
2,4,6-Trichlorophenol	ND	mg/L		0.00284	0.0142	7/15/2008 1:00:00 AM
Surr: 2-Fluorophenol	49.4	%REC			21-110	7/15/2008 1:00:00 AM
Surr: Phenol-d5	35.1	%REC			10-110	7/15/2008 1:00:00 AM
Surr: 2,4,6-Tribromophenol	92.1	%REC			10-123	7/15/2008 1:00:00 AM
Surr: Nitrobenzene-d5	77.1	%REC			35-114	7/15/2008 1:00:00 AM
Surr: 2-Fluorobiphenyl	80.1	%REC			43-116	7/15/2008 1:00:00 AM
Surr: 4-Terphenyl-d14	73.0	%REC			33-141	7/15/2008 1:00:00 AM
TIC: Silane, hexyl-	0.0179	mg/L		NA	NA	7/15/2008 1:00:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-LIQUID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/14/2008 3:43:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/14/2008 3:43:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/14/2008 3:43:00 PM
Benzene	ND	µg/L		0.13	1.0	7/14/2008 3:43:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/14/2008 3:43:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/14/2008 3:43:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/14/2008 3:43:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/14/2008 3:43:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/14/2008 3:43:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/14/2008 3:43:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/14/2008 3:43:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/14/2008 3:43:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/14/2008 3:43:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/14/2008 3:43:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/14/2008 3:43:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/14/2008 3:43:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/14/2008 3:43:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/14/2008 3:43:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/14/2008 3:43:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/14/2008 3:43:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/14/2008 3:43:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/14/2008 3:43:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/14/2008 3:43:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/14/2008 3:43:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/14/2008 3:43:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/14/2008 3:43:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/14/2008 3:43:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/14/2008 3:43:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/14/2008 3:43:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/14/2008 3:43:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/14/2008 3:43:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/14/2008 3:43:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/14/2008 3:43:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/14/2008 3:43:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/14/2008 3:43:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/14/2008 3:43:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/14/2008 3:43:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-LIQUID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/14/2008 3:43:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 3:43:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/14/2008 3:43:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/14/2008 3:43:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/14/2008 3:43:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/14/2008 3:43:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/14/2008 3:43:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/14/2008 3:43:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/14/2008 3:43:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/14/2008 3:43:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/14/2008 3:43:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/14/2008 3:43:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/14/2008 3:43:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/14/2008 3:43:00 PM
Styrene	ND	µg/L		0.24	1.0	7/14/2008 3:43:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/14/2008 3:43:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/14/2008 3:43:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/14/2008 3:43:00 PM
Toluene	ND	µg/L		0.17	1.0	7/14/2008 3:43:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 3:43:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/14/2008 3:43:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/14/2008 3:43:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/14/2008 3:43:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/14/2008 3:43:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/14/2008 3:43:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/14/2008 3:43:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 3:43:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/14/2008 3:43:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/14/2008 3:43:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/14/2008 3:43:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/14/2008 3:43:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/14/2008 3:43:00 PM
Surr: 1,2-Dichloroethane-d4	106	%REC			80-120	7/14/2008 3:43:00 PM
Surr: 4-Bromofluorobenzene	99.2	%REC			86-115	7/14/2008 3:43:00 PM
Surr: Dibromofluoromethane	115	%REC			80-120	7/14/2008 3:43:00 PM
Surr: Toluene-d8	100	%REC			88-110	7/14/2008 3:43:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/14/2008 3:43:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-LIQUID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/10/2008 1:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	3.45	mg/L		0.050	0.10	7/9/2008 5:16:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	7/9/2008 5:16:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	77.1	mg/L		0.100	1.00	7/17/2008 8:22:00 PM
Fluoride	0.56	mg/L		0.050	0.20	7/17/2008 8:22:00 PM
Sulfate	853	mg/L		0.700	5.00	7/17/2008 8:22:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	1.16	mg/L		0.030	0.10	7/10/2008 10:00:00 AM
OIL AND GREASE			**E1664A**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664A**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	2,110	µmhos/cm		NA	NA	7/10/2008 6:00:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,470	mg/L		1.0	1	7/10/2008 7:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	9	mg/L		1.0	1	7/10/2008 7:05:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	8.7	mg/L		1.00	1.0	7/10/2008 10:55:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	146	mg/L		1.00	1.0	7/10/2008 10:55:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/10/2008 10:55:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	147	mg/L		1.00	1.0	7/10/2008 10:55:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.75	SU		NA	NA	7/10/2008 10:55:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-LIQUID/LAB FILTERED
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01B
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.509	mg/L		0.0200	0.100	7/22/2008 6:47:00 PM
Calcium	124	mg/L		0.100	0.500	7/22/2008 6:47:00 PM
Iron	0.030	mg/L	J	0.0200	0.100	7/22/2008 6:47:00 PM
Magnesium	81.4	mg/L		0.400	0.500	7/22/2008 6:47:00 PM
Manganese	0.921	mg/L		0.0010	0.050	7/22/2008 6:47:00 PM
Potassium	15.5	mg/L		0.300	1.00	7/22/2008 6:47:00 PM
Silicon	3.27	mg/L		0.0100	0.100	8/5/2008 8:37:00 AM
Sodium	236	mg/L		0.100	0.500	7/22/2008 6:47:00 PM
Zinc	0.032	mg/L	J	0.0030	0.050	7/22/2008 6:47:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0004	mg/L	J	0.00020	0.0010	7/11/2008 10:14:03 AM
Arsenic	ND	mg/L		0.00100	0.0050	7/11/2008 10:14:03 AM
Barium	0.0523	mg/L		0.00100	0.0050	7/11/2008 10:14:03 AM
Beryllium	ND	mg/L		0.00020	0.0010	7/11/2008 10:14:03 AM
Cadmium	ND	mg/L		0.00020	0.0010	7/11/2008 10:14:03 AM
Chromium	ND	mg/L		0.00100	0.0050	7/11/2008 10:14:03 AM
Cobalt	0.0037	mg/L	J	0.00100	0.0050	7/11/2008 10:14:03 AM
Copper	0.0015	mg/L	J	0.00100	0.0050	7/11/2008 10:14:03 AM
Lead	ND	mg/L		0.00020	0.0010	7/11/2008 10:14:03 AM
Molybdenum	0.0023	mg/L	J	0.00100	0.0050	7/11/2008 10:14:03 AM
Nickel	0.0092	mg/L	J	0.00200	0.0100	7/11/2008 10:14:03 AM
Selenium	0.0057	mg/L		0.00100	0.0050	7/11/2008 10:14:03 AM
Silver	0.0006	mg/L	J	0.00020	0.0050	7/11/2008 10:14:03 AM
Strontium	1.63	mg/L		0.00100	0.0050	7/11/2008 10:14:03 AM
Thallium	0.0002	mg/L	J	0.00020	0.0010	7/11/2008 10:14:03 AM
Vanadium	ND	mg/L		0.00100	0.0100	7/11/2008 10:14:03 AM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/11/2008 2:06:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-SOLID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01S
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010C**			Analyst: **JD**
Aluminum	1,040	mg/Kg		0.200	2.50	7/11/2008 11:18:00 AM
Antimony	ND	mg/Kg		1.50	5.00	7/11/2008 11:18:00 AM
Arsenic	2.11	mg/Kg	J	1.50	5.00	7/11/2008 11:18:00 AM
Barium	170	mg/Kg		0.100	2.50	7/11/2008 11:18:00 AM
Beryllium	0.289	mg/Kg		0.0200	0.250	7/11/2008 11:18:00 AM
Cadmium	0.149	mg/Kg	J	0.0500	0.500	7/11/2008 11:18:00 AM
Calcium	371	mg/Kg		2.50	25.0	7/11/2008 11:18:00 AM
Chromium	4.33	mg/Kg		0.100	2.50	7/11/2008 11:18:00 AM
Cobalt	3.02	mg/Kg		0.100	2.50	7/11/2008 11:18:00 AM
Copper	6.16	mg/Kg		0.200	2.50	7/11/2008 11:18:00 AM
Iron	9,890	mg/Kg		5.00	25.0	7/11/2008 11:38:00 AM
Lead	4.89	mg/Kg	J	0.500	5.00	7/11/2008 11:18:00 AM
Magnesium	324	mg/Kg		2.50	12.0	7/11/2008 11:18:00 AM
Manganese	34.3	mg/Kg		0.0500	2.50	7/11/2008 11:18:00 AM
Molybdenum	0.408	mg/Kg	J	0.200	2.50	7/11/2008 11:18:00 AM
Nickel	6.10	mg/Kg		0.200	2.50	7/11/2008 11:18:00 AM
Potassium	422	mg/Kg		2.50	12.0	7/11/2008 11:18:00 AM
Selenium	ND	mg/Kg		0.500	5.00	7/11/2008 11:18:00 AM
Silicon	250	mg/Kg		0.500	2.50	8/5/2008 9:38:00 AM
Silver	ND	mg/Kg		0.100	2.50	7/11/2008 11:18:00 AM
Sodium	85.7	mg/Kg		2.50	25.0	7/11/2008 11:18:00 AM
Strontium	14.4	mg/Kg		0.100	2.50	7/11/2008 2:41:00 PM
Thallium	ND	mg/Kg		0.500	5.00	7/11/2008 11:18:00 AM
Vanadium	25.6	mg/Kg		0.200	2.50	7/11/2008 11:18:00 AM
Zinc	10.3	mg/Kg		0.200	2.50	7/11/2008 11:18:00 AM

NOTES:
Sample duplicate result for V did not meet REIC control criteria due to heterogeneous sample.
Matrix spike recovery for [Sb, Mg, and K] did not meet REIC control criteria due to matrix interference. Recovery of associated post-digestion spike met REIC control criteria.

MERCURY, TOTAL			**SW7471B**			Analyst: **DL**
Mercury	0.112	mg/Kg		0.0100	0.050	7/14/2008 4:09:00 PM
OIL AND GREASE			**SW9071**			Analyst: **TM**
Oil & Grease, Total Recoverable	0.021	wt%-dry		0.0010	0.010	7/23/2008
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	222	mg/Kg		4.82	8.00	7/16/2008 2:54:27 AM
TPH (Oil Range)	382	mg/Kg		2.08	20.0	7/16/2008 2:54:27 AM

Key:				
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-SOLID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01S
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
Surr: o-Terphenyl	103	%REC			30-130	7/16/2008 2:54:27 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Ethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Triethylene Glycol	ND	mg/Kg		100	100	7/18/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Acenaphthylene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Anthracene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Benzidine	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Benzo(a)anthracene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Benzo(a)pyrene	0.463	mg/Kg	J	0.127	0.653	7/15/2008 12:43:00 AM
Benzo(b)fluoranthene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Benzo(g,h,i)perylene	0.346	mg/Kg	J	0.127	0.653	7/15/2008 12:43:00 AM
Benzo(k)fluoranthene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/Kg		0.392	0.653	7/15/2008 12:43:00 AM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Butyl benzyl phthalate	ND	mg/Kg		0.294	0.653	7/15/2008 12:43:00 AM
4-Chloro-3-methylphenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2-Chloronaphthalene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2-Chlorophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Chrysene	0.248	mg/Kg	J	0.127	0.653	7/15/2008 12:43:00 AM
o-Cresol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
m,p-Cresol	ND	mg/Kg		0.212	1.31	7/15/2008 12:43:00 AM
Dibenzo(a,h)anthracene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Di-n-butyl phthalate	ND	mg/Kg		0.294	0.653	7/15/2008 12:43:00 AM
1,2-Dichlorobenzene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
1,3-Dichlorobenzene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
1,4-Dichlorobenzene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
3,3´-Dichlorobenzidine	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2,4-Dichlorophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Diethyl phthalate	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-SOLID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01S
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Dimethyl phthalate	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2,4-Dimethylphenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2,4-Dinitrophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2,4-Dinitrotoluene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2,6-Dinitrotoluene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Di-n-octyl phthalate	ND	mg/Kg		0.294	0.653	7/15/2008 12:43:00 AM
1,2-Diphenylhydrazine	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Fluoranthene	0.144	mg/Kg	J	0.127	0.653	7/15/2008 12:43:00 AM
Fluorene	0.180	mg/Kg	J	0.127	0.653	7/15/2008 12:43:00 AM
Hexachlorobenzene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Hexachlorobutadiene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Hexachlorocyclopentadiene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Hexachloroethane	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Isophorone	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Naphthalene	1.41	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Nitrobenzene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2-Nitrophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
4-Nitrophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
N-Nitrosodimethylamine	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
N-Nitrosodiphenylamine	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Pentachlorophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Phenanthrene	1.09	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Phenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Pyrene	0.169	mg/Kg	J	0.127	0.653	7/15/2008 12:43:00 AM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2,4,5-Trichlorophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
2,4,6-Trichlorophenol	ND	mg/Kg		0.127	0.653	7/15/2008 12:43:00 AM
Surr: 2-Fluorophenol	74.3	%REC			29.1-120	7/15/2008 12:43:00 AM
Surr: Phenol-d5	72.4	%REC			36.1-163	7/15/2008 12:43:00 AM
Surr: 2,4,6-Tribromophenol	99.5	%REC			35.1-151	7/15/2008 12:43:00 AM
Surr: Nitrobenzene-d5	94.1	%REC			41.1-132	7/15/2008 12:43:00 AM
Surr: 2-Fluorobiphenyl	88.6	%REC			32.9-121	7/15/2008 12:43:00 AM
Surr: 4-Terphenyl-d14	79.5	%REC			50.9-145	7/15/2008 12:43:00 AM
TIC: Eicosane	0.739	mg/Kg		NA	NA	7/15/2008 12:43:00 AM

Key:

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-SOLID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01S
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Naphthalene, 1,3-dimethyl-	1.29	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
TIC: Naphthalene, 1,4-dimethyl-	0.667	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
TIC: Naphthalene, 1-methyl-	1.39	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
TIC: Naphthalene, 2-methyl	2.50	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
TIC: N-N'-Diethyl-1,3-[1,3-13C2]-propane	1.02	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
TIC: Nonadecane	0.680	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
TIC: Pyrimidine, 2-chloro-4-ethyl-6-methyl-	0.778	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
TIC: Triacontane	0.725	mg/Kg		NA	NA	7/15/2008 12:43:00 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/Kg		167	800	7/17/2008 9:25:00 AM
Acrolein	ND	µg/Kg		160	400	7/17/2008 9:25:00 AM
Acrylonitrile	ND	µg/Kg		127	400	7/17/2008 9:25:00 AM
Carbon disulfide	ND	µg/Kg		32.4	400	7/17/2008 9:25:00 AM
Iodomethane	ND	µg/Kg		55.5	400	7/17/2008 9:25:00 AM
Methyl tert-butyl ether	ND	µg/Kg		27.5	400	7/17/2008 9:25:00 AM
Vinyl acetate	ND	µg/Kg		180	400	7/17/2008 9:25:00 AM
Benzene	ND	µg/Kg		10.0	40.0	7/17/2008 9:25:00 AM
Bromobenzene	ND	µg/Kg		24.3	40.0	7/17/2008 9:25:00 AM
Bromochloromethane	ND	µg/Kg		10.2	40.0	7/17/2008 9:25:00 AM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	7/17/2008 9:25:00 AM
Bromoform	ND	µg/Kg		21.0	40.0	7/17/2008 9:25:00 AM
2-Butanone	ND	µg/Kg		159	400	7/17/2008 9:25:00 AM
Bromomethane	ND	µg/Kg		15.8	40.0	7/17/2008 9:25:00 AM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	7/17/2008 9:25:00 AM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	7/17/2008 9:25:00 AM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	7/17/2008 9:25:00 AM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	7/17/2008 9:25:00 AM
Chlorobenzene	ND	µg/Kg		13.3	40.0	7/17/2008 9:25:00 AM
Chloroethane	ND	µg/Kg		17.1	40.0	7/17/2008 9:25:00 AM
Chloroform	ND	µg/Kg		5.82	40.0	7/17/2008 9:25:00 AM
Chloromethane	ND	µg/Kg		7.52	40.0	7/17/2008 9:25:00 AM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	7/17/2008 9:25:00 AM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	7/17/2008 9:25:00 AM
Dibromochloromethane	ND	µg/Kg		10.7	40.0	7/17/2008 9:25:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	7/17/2008 9:25:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-SOLID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01S
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	7/17/2008 9:25:00 AM
Dibromomethane	ND	µg/Kg		13.3	40.0	7/17/2008 9:25:00 AM
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	7/17/2008 9:25:00 AM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	7/17/2008 9:25:00 AM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	7/17/2008 9:25:00 AM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	7/17/2008 9:25:00 AM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	7/17/2008 9:25:00 AM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	7/17/2008 9:25:00 AM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	7/17/2008 9:25:00 AM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	7/17/2008 9:25:00 AM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	7/17/2008 9:25:00 AM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	7/17/2008 9:25:00 AM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	7/17/2008 9:25:00 AM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	7/17/2008 9:25:00 AM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	7/17/2008 9:25:00 AM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	7/17/2008 9:25:00 AM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	7/17/2008 9:25:00 AM
Ethylbenzene	ND	µg/Kg		13.4	40.0	7/17/2008 9:25:00 AM
2-Hexanone	ND	µg/Kg		79.1	400	7/17/2008 9:25:00 AM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	7/17/2008 9:25:00 AM
Isopropylbenzene	29.9	µg/Kg	J	22.6	40.0	7/17/2008 9:25:00 AM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	7/17/2008 9:25:00 AM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	7/17/2008 9:25:00 AM
Methylene chloride	ND	µg/Kg		12.3	40.0	7/17/2008 9:25:00 AM
Naphthalene	34.4	µg/Kg	J	27.7	40.0	7/17/2008 9:25:00 AM
n-Propylbenzene	ND	µg/Kg		13.1	40.0	7/17/2008 9:25:00 AM
Styrene	ND	µg/Kg		10.4	40.0	7/17/2008 9:25:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	7/17/2008 9:25:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	7/17/2008 9:25:00 AM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	7/17/2008 9:25:00 AM
Toluene	51.6	µg/Kg		11.0	40.0	7/17/2008 9:25:00 AM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	7/17/2008 9:25:00 AM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	7/17/2008 9:25:00 AM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	7/17/2008 9:25:00 AM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	7/17/2008 9:25:00 AM
Trichloroethene	ND	µg/Kg		9.05	40.0	7/17/2008 9:25:00 AM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	7/17/2008 9:25:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-SOLID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01S
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	7/17/2008 9:25:00 AM
1,2,4-Trimethylbenzene	25.2	µg/Kg	J	17.0	40.0	7/17/2008 9:25:00 AM
1,3,5-Trimethylbenzene	ND	µg/Kg		20.4	40.0	7/17/2008 9:25:00 AM
Vinyl chloride	ND	µg/Kg		10.6	40.0	7/17/2008 9:25:00 AM
o-Xylene	28.7	µg/Kg	J	13.5	40.0	7/17/2008 9:25:00 AM
m,p-Xylene	44.6	µg/Kg	J	28.3	80.0	7/17/2008 9:25:00 AM
Surr: 1,2-Dichloroethane-d4	101	%REC			72-120	7/17/2008 9:25:00 AM
Surr: 4-Bromofluorobenzene	142	%REC	S		74-121	7/17/2008 9:25:00 AM
Surr: Dibromofluoromethane	116	%REC			75-120	7/17/2008 9:25:00 AM
Surr: Toluene-d8	143	%REC	S		81-117	7/17/2008 9:25:00 AM
TIC: 2,2,8-trimethyl decane	45.8	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: 2,5,6-trimethyl decane	25.0	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: 2,6,10-trimethyl dodecane	19.1	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: 2-ethyl hexanal	38.0	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: 2-methyl pentane	10.7	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: butanal	14.3	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: hexamethyl cyclotrisiloxane	11.7	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: methyl cyclohexane	23.8	µg/Kg		NA	NA	7/17/2008 9:25:00 AM
TIC: tetradecane	60.5	µg/Kg		NA	NA	7/17/2008 9:25:00 AM

NOTES:
Surrogate recovery was not within method criteria due to matrix interference.
Elevated PQLs are due to matrix interference.

CYANIDE			**SW9010/9012A**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	7/16/2008 12:15:00 PM
ANIONS BY IC, WATER SOLUBLE			**SW9056**			Analyst: **SB**
Chloride	130	mg/Kg		1.00	1.00	7/18/2008 3:18:00 PM
Fluoride	5.10	mg/Kg		1.00	1.00	7/18/2008 3:18:00 PM
Nitrogen, Nitrate	4.10	mg/Kg		1.00	1.00	7/18/2008 3:18:00 PM
Nitrogen, Nitrite	ND	mg/Kg		1.00	5.00	7/18/2008 3:18:00 PM
Sulfate	798	mg/Kg		1.00	50.0	7/18/2008 3:18:00 PM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JJ**
Nitrogen, Ammonia	19.9	mg/Kg		7.00	10.0	7/21/2008 4:00:00 PM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	1.58	wt%		0.010	0.01	7/10/2008 7:30:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-SLURRY-SOLID
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-01S
DateReceived: 7/9/2008
Collection Date: 7/8/2008 10:45:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	352	mg/Kg		1.00	10.0	7/10/2008 10:55:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/Kg		1.00	10.0	7/10/2008 10:55:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	352	mg/Kg		1.00	10.0	7/10/2008 10:55:00 AM
PH			**SW9045C**			Analyst: **DSA**
pH	7.35	SU		NA	NA	7/10/2008 10:55:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807583 **Lab ID** 0807583-02A
Client Sample ID:	PM-COAL	**DateReceived:**	7/9/2008
Project:	PL SLURRY	**Collection Date:**	7/8/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010C**			Analyst: **JD**
Aluminum	8,740	mg/Kg		4.00	50.0	7/14/2008 12:15:00 PM
Antimony	ND	mg/Kg		3.00	10.0	7/14/2008 12:02:00 PM
Arsenic	4.34	mg/Kg	J	3.00	10.0	7/14/2008 12:02:00 PM
Barium	137	mg/Kg		0.200	5.00	7/14/2008 12:02:00 PM
Beryllium	1.29	mg/Kg		0.0400	0.500	7/14/2008 12:02:00 PM
Cadmium	0.577	mg/Kg	J	0.100	1.00	7/14/2008 12:02:00 PM
Calcium	1,640	mg/Kg		5.00	50.0	7/14/2008 12:02:00 PM
Chromium	14.3	mg/Kg		0.200	5.00	7/14/2008 12:02:00 PM
Cobalt	13.8	mg/Kg		0.200	5.00	7/14/2008 12:02:00 PM
Copper	25.7	mg/Kg		0.400	5.00	7/14/2008 12:02:00 PM
Iron	33,800	mg/Kg		10.0	50.0	7/14/2008 12:15:00 PM
Lead	16.7	mg/Kg		1.00	10.0	7/14/2008 12:02:00 PM
Magnesium	3,150	mg/Kg		5.00	24.0	7/14/2008 12:02:00 PM
Manganese	570	mg/Kg		0.100	5.00	7/14/2008 12:02:00 PM
Molybdenum	0.560	mg/Kg	J	0.400	5.00	7/14/2008 12:02:00 PM
Nickel	22.1	mg/Kg		0.400	5.00	7/14/2008 12:02:00 PM
Potassium	2,160	mg/Kg		5.00	24.0	7/14/2008 12:02:00 PM
Selenium	ND	mg/Kg		1.00	10.0	7/14/2008 12:02:00 PM
Silicon	342	mg/Kg		2.50	12.5	8/5/2008 9:11:00 AM
Silver	ND	mg/Kg		0.200	5.00	7/14/2008 12:02:00 PM
Sodium	588	mg/Kg		5.00	50.0	7/14/2008 12:02:00 PM
Strontium	68.9	mg/Kg		0.200	5.00	7/15/2008 1:28:00 PM
Thallium	ND	mg/Kg		1.00	10.0	7/14/2008 12:02:00 PM
Vanadium	13.2	mg/Kg		0.400	5.00	7/14/2008 12:02:00 PM
Zinc	68.9	mg/Kg		0.400	5.00	7/14/2008 12:02:00 PM

NOTES:

Matrix spike recovery for K did not meet REIC control criteria due to matrix interference.

Matrix spike recovery for [Sb, Ba, Mg, Tl] did not meet REIC control criteria due to matrix interference. Recovery of associated post-digestion spike met REIC control criteria.

MERCURY, TOTAL			**SW7471B**			Analyst: **DL**
Mercury	0.044	mg/Kg	J	0.0100	0.050	7/14/2008 4:11:00 PM
OIL AND GREASE			**SW9071**			Analyst: **TM**
Oil & Grease, Total Recoverable	0.067	wt%-dry		0.0010	0.010	7/23/2008
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	927	mg/Kg		2.41	4.00	7/16/2008 3:28:42 AM
TPH (Oil Range)	782	mg/Kg		1.04	10.0	7/16/2008 3:28:42 AM

Key:				
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	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807583 **Lab ID** 0807583-02A
Client Sample ID:	PM-COAL	**DateReceived:**	7/9/2008
Project:	PL SLURRY	**Collection Date:**	7/8/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
Surr: o-Terphenyl	134	%REC	S		30-130	7/16/2008 3:28:42 AM
NOTES: Surrogate recovery was not within method criteria due to matrix interference.						
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Ethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Triethylene Glycol	ND	mg/Kg		100	100	7/18/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	0.072	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Acenaphthylene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Anthracene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Benzidine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Benzo(a)anthracene	0.127	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Benzo(a)pyrene	0.329	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Benzo(b)fluoranthene	0.261	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Benzo(g,h,i)perylene	0.982	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Benzo(k)fluoranthene	0.278	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Bis(2-ethylhexyl)phthalate	0.217	mg/Kg	J	0.200	0.333	7/15/2008 1:14:00 AM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Butyl benzyl phthalate	ND	mg/Kg		0.150	0.333	7/15/2008 1:14:00 AM
4-Chloro-3-methylphenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2-Chloronaphthalene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2-Chlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Chrysene	1.16	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
o-Cresol	0.224	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
m,p-Cresol	0.175	mg/Kg	J	0.108	0.666	7/15/2008 1:14:00 AM
Dibenzo(a,h)anthracene	0.183	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Di-n-butyl phthalate	ND	mg/Kg		0.150	0.333	7/15/2008 1:14:00 AM
1,2-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
1,3-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
1,4-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
3,3'-Dichlorobenzidine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dichlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Diethyl phthalate	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Dimethyl phthalate	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2,4-Dimethylphenol	0.466	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2,4-Dinitrophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2,4-Dinitrotoluene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2,6-Dinitrotoluene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Di-n-octyl phthalate	ND	mg/Kg		0.150	0.333	7/15/2008 1:14:00 AM
1,2-Diphenylhydrazine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Fluoranthene	0.288	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Fluorene	0.852	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Hexachlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Hexachlorobutadiene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Hexachlorocyclopentadiene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Hexachloroethane	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Indeno(1,2,3-cd)pyrene	0.175	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Isophorone	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Naphthalene	7.54	mg/Kg		0.650	3.33	7/17/2008 6:06:00 PM
Nitrobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2-Nitrophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
4-Nitrophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
N-Nitrosodimethylamine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
N-Nitrosodiphenylamine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Pentachlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Phenanthrene	4.99	mg/Kg		0.650	3.33	7/17/2008 6:06:00 PM
Phenol	0.075	mg/Kg	J	0.0650	0.333	7/15/2008 1:14:00 AM
Pyrene	0.447	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2,4,5-Trichlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
2,4,6-Trichlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:14:00 AM
Surr: 2-Fluorophenol	78.4	%REC			29.1-120	7/15/2008 1:14:00 AM
Surr: Phenol-d5	72.4	%REC			36.1-163	7/15/2008 1:14:00 AM
Surr: 2,4,6-Tribromophenol	53.2	%REC			35.1-151	7/15/2008 1:14:00 AM
Surr: Nitrobenzene-d5	112	%REC			41.1-132	7/15/2008 1:14:00 AM
Surr: 2-Fluorobiphenyl	91.3	%REC			32.9-121	7/15/2008 1:14:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Surr: 4-Terphenyl-d14	82.4	%REC			50.9-145	7/15/2008 1:14:00 AM
TIC: Decane	6.74	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Docosane	1.44	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Eicosane	1.92	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Hexacosane	1.33	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Naphthalene, 2-methyl-	14.8	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Octadecane	6.43	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Pentacosane	1.83	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Tetracosane	1.74	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Tricosane	1.90	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
TIC: Tridecane, 7-hexyl-	1.49	mg/Kg		NA	NA	7/15/2008 1:14:00 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/Kg		167	800	7/17/2008 10:00:00 AM
Acrolein	ND	µg/Kg		160	400	7/17/2008 10:00:00 AM
Acrylonitrile	ND	µg/Kg		127	400	7/17/2008 10:00:00 AM
Carbon disulfide	ND	µg/Kg		32.4	400	7/17/2008 10:00:00 AM
Iodomethane	ND	µg/Kg		55.5	400	7/17/2008 10:00:00 AM
Methyl tert-butyl ether	ND	µg/Kg		27.5	400	7/17/2008 10:00:00 AM
Vinyl acetate	ND	µg/Kg		180	400	7/17/2008 10:00:00 AM
Benzene	330	µg/Kg		10.0	40.0	7/17/2008 10:00:00 AM
Bromobenzene	ND	µg/Kg		24.3	40.0	7/17/2008 10:00:00 AM
Bromochloromethane	ND	µg/Kg		10.2	40.0	7/17/2008 10:00:00 AM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	7/17/2008 10:00:00 AM
Bromoform	ND	µg/Kg		21.0	40.0	7/17/2008 10:00:00 AM
2-Butanone	ND	µg/Kg		159	400	7/17/2008 10:00:00 AM
Bromomethane	ND	µg/Kg		15.8	40.0	7/17/2008 10:00:00 AM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	7/17/2008 10:00:00 AM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	7/17/2008 10:00:00 AM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	7/17/2008 10:00:00 AM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	7/17/2008 10:00:00 AM
Chlorobenzene	ND	µg/Kg		13.3	40.0	7/17/2008 10:00:00 AM
Chloroethane	ND	µg/Kg		17.1	40.0	7/17/2008 10:00:00 AM
Chloroform	ND	µg/Kg		5.82	40.0	7/17/2008 10:00:00 AM
Chloromethane	ND	µg/Kg		7.52	40.0	7/17/2008 10:00:00 AM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	7/17/2008 10:00:00 AM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	7/17/2008 10:00:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Dibromochloromethane	ND	µg/Kg		10.7	40.0	7/17/2008 10:00:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	7/17/2008 10:00:00 AM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	7/17/2008 10:00:00 AM
Dibromomethane	ND	µg/Kg		13.3	40.0	7/17/2008 10:00:00 AM
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	7/17/2008 10:00:00 AM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	7/17/2008 10:00:00 AM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	7/17/2008 10:00:00 AM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	7/17/2008 10:00:00 AM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	7/17/2008 10:00:00 AM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	7/17/2008 10:00:00 AM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	7/17/2008 10:00:00 AM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	7/17/2008 10:00:00 AM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	7/17/2008 10:00:00 AM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	7/17/2008 10:00:00 AM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	7/17/2008 10:00:00 AM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	7/17/2008 10:00:00 AM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	7/17/2008 10:00:00 AM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	7/17/2008 10:00:00 AM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	7/17/2008 10:00:00 AM
Ethylbenzene	139	µg/Kg		13.4	40.0	7/17/2008 10:00:00 AM
2-Hexanone	ND	µg/Kg		79.1	400	7/17/2008 10:00:00 AM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	7/17/2008 10:00:00 AM
Isopropylbenzene	132	µg/Kg		22.6	40.0	7/17/2008 10:00:00 AM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	7/17/2008 10:00:00 AM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	7/17/2008 10:00:00 AM
Methylene chloride	23.2	µg/Kg	J	12.3	40.0	7/17/2008 10:00:00 AM
Naphthalene	99.3	µg/Kg		27.7	40.0	7/17/2008 10:00:00 AM
n-Propylbenzene	61.0	µg/Kg		13.1	40.0	7/17/2008 10:00:00 AM
Styrene	ND	µg/Kg		10.4	40.0	7/17/2008 10:00:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	7/17/2008 10:00:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	7/17/2008 10:00:00 AM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	7/17/2008 10:00:00 AM
Toluene	8,670	µg/Kg		1,100	1,000	7/18/2008 2:41:00 PM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	7/17/2008 10:00:00 AM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	7/17/2008 10:00:00 AM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	7/17/2008 10:00:00 AM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	7/17/2008 10:00:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Trichloroethene	ND	µg/Kg		9.05	40.0	7/17/2008 10:00:00 AM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	7/17/2008 10:00:00 AM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	7/17/2008 10:00:00 AM
1,2,4-Trimethylbenzene	398	µg/Kg		17.0	40.0	7/17/2008 10:00:00 AM
1,3,5-Trimethylbenzene	183	µg/Kg		20.4	40.0	7/17/2008 10:00:00 AM
Vinyl chloride	ND	µg/Kg		10.6	40.0	7/17/2008 10:00:00 AM
o-Xylene	473	µg/Kg		13.5	40.0	7/17/2008 10:00:00 AM
m,p-Xylene	976	µg/Kg		28.3	80.0	7/17/2008 10:00:00 AM
Surr: 1,2-Dichloroethane-d4	78.0	%REC			72-120	7/18/2008 2:41:00 PM
Surr: 4-Bromofluorobenzene	88.4	%REC			74-121	7/18/2008 2:41:00 PM
Surr: Dibromofluoromethane	93.3	%REC			75-120	7/18/2008 2:41:00 PM
Surr: Toluene-d8	94.9	%REC			81-117	7/18/2008 2:41:00 PM
TIC: 2-butanol	582	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: 2-methyl butane	552	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: 2-methyl pentane	339	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: 2-methyl propane	781	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: 3-methyl pentane	128	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: Cyclohexane	548	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: hexane	160	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: methyl cyclohexane	591	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: methylcyclopentane	176	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
TIC: propane	590	µg/Kg		NA	NA	7/17/2008 10:00:00 AM
NOTES: Elevated PQLs are due to matrix interference.						
CYANIDE			**SW9010/9012A**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	7/16/2008 12:15:00 PM
ANIONS BY IC, WATER SOLUBLE			**SW9056**			Analyst: **SB**
Chloride	26.1	mg/Kg		1.00	1.00	7/18/2008 3:18:00 PM
Fluoride	ND	mg/Kg		1.00	1.00	7/18/2008 3:18:00 PM
Nitrogen, Nitrate	ND	mg/Kg		1.00	1.00	7/18/2008 3:18:00 PM
Nitrogen, Nitrite	ND	mg/Kg		1.00	5.00	7/18/2008 3:18:00 PM
Sulfate	26.8	mg/Kg	J	1.00	50.0	7/18/2008 3:18:00 PM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JJ**
Nitrogen, Ammonia	68.3	mg/Kg		1.40	20.0	7/21/2008 4:00:00 PM

Key:				
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02A
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	100	wt%		0.010	0.01	7/11/2008 6:50:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	787	mg/L		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	77.4	mg/L		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	865	mg/Kg		1.00	10.0	7/11/2008 4:25:00 PM
PH			**SW9045C**			Analyst: **DSA**
pH	9.02	SU		NA	NA	7/11/2008 4:25:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL-LEACHATE
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02L
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/16/2008 11:38:21 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.044	0.11	7/15/2008 4:38:21 PM
TPH (Oil Range)	ND	mg/L		0.023	0.27	7/15/2008 4:38:21 PM
Surr: o-Terphenyl	95.6	%REC			30-130	7/15/2008 4:38:21 PM
NOTES: Insufficient sample was available to prepare and analyze a matrix spiked quality control sample. Accuracy assessment was based on a lab contro sample.						
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		50.0	50.0	7/23/2008
Monoethylene Glycol	ND	mg/L		50.0	50.0	7/23/2008
Triethylene Glycol	ND	mg/L		50.0	50.0	7/23/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Acenaphthylene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Anthracene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Benzidine	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Benzo(a)anthracene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Benzo(a)pyrene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Bis(2-ethylhexyl)phthalate	0.0091	mg/L	J	0.00665	0.0111	7/16/2008 9:30:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00554	0.0111	7/16/2008 9:30:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2-Chloronaphthalene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2-Chlorophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Chrysene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
o-Cresol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
m,p-Cresol	ND	mg/L		0.00554	0.0222	7/16/2008 9:30:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL-LEACHATE
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02L
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Di-n-butyl phthalate	ND	mg/L		0.00333	0.0111	7/16/2008 9:30:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Diethyl phthalate	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Dimethyl phthalate	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00554	0.0111	7/16/2008 9:30:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Fluoranthene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Fluorene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Hexachlorobenzene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Hexachlorobutadiene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Hexachloroethane	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Isophorone	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Naphthalene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Nitrobenzene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2-Nitrophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
4-Nitrophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Pentachlorophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Phenanthrene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Phenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
Pyrene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00222	0.0111	7/16/2008 9:30:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL-LEACHATE
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02L
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Surr: 2-Fluorophenol	49.7	%REC			21-110	7/16/2008 9:30:00 PM
Surr: Phenol-d5	32.8	%REC			10-110	7/16/2008 9:30:00 PM
Surr: 2,4,6-Tribromophenol	98.5	%REC			10-123	7/16/2008 9:30:00 PM
Surr: Nitrobenzene-d5	92.8	%REC			35-114	7/16/2008 9:30:00 PM
Surr: 2-Fluorobiphenyl	84.7	%REC			43-116	7/16/2008 9:30:00 PM
Surr: 4-Terphenyl-d14	79.3	%REC			33-141	7/16/2008 9:30:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/16/2008 9:30:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 12:30:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 12:30:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 12:30:00 PM
Benzene	1.4	µg/L		0.13	1.0	7/15/2008 12:30:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 12:30:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 12:30:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 12:30:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 12:30:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 12:30:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 12:30:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 12:30:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 12:30:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 12:30:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 12:30:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 12:30:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 12:30:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 12:30:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 12:30:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 12:30:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 12:30:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 12:30:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 12:30:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 12:30:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 12:30:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 12:30:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 12:30:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 12:30:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 12:30:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL-LEACHATE
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02L
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 12:30:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 12:30:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 12:30:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 12:30:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 12:30:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 12:30:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 12:30:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 12:30:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 12:30:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 12:30:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 12:30:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 12:30:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 12:30:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 12:30:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 12:30:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 12:30:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 12:30:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 12:30:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 12:30:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 12:30:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 12:30:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 12:30:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 12:30:00 PM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 12:30:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 12:30:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 12:30:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 12:30:00 PM
Toluene	1.9	µg/L		0.17	1.0	7/15/2008 12:30:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 12:30:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 12:30:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 12:30:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 12:30:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 12:30:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 12:30:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 12:30:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 12:30:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 12:30:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL-LEACHATE
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02L
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 12:30:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 12:30:00 PM
o-Xylene	0.3	µg/L	J	0.19	1.0	7/15/2008 12:30:00 PM
m,p-Xylene	0.4	µg/L	J	0.29	2.0	7/15/2008 12:30:00 PM
Surr: 1,2-Dichloroethane-d4	86.6	%REC			80-120	7/15/2008 12:30:00 PM
Surr: 4-Bromofluorobenzene	95.8	%REC			86-115	7/15/2008 12:30:00 PM
Surr: Dibromofluoromethane	94.4	%REC			80-120	7/15/2008 12:30:00 PM
Surr: Toluene-d8	95.6	%REC			88-110	7/15/2008 12:30:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 12:30:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/16/2008 12:15:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	7/9/2008 12:03:00 PM
Nitrogen, Nitrite	0.14	mg/L	J	0.050	0.50	7/9/2008 12:03:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	1.71	mg/L		0.100	1.00	7/17/2008 8:22:00 PM
Fluoride	0.42	mg/L		0.050	0.20	7/17/2008 8:22:00 PM
Sulfate	3.44	mg/L	J	0.700	5.00	7/17/2008 8:22:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.35	mg/L		0.030	0.10	7/16/2008 9:45:00 AM
OIL AND GREASE			**E1664A**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
OIL AND GREASE_SGT			**E1664A**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/18/2008 7:15:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	100	µmhos/cm		NA	NA	7/14/2008 6:25:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	21	mg/L		1.0	1	7/14/2008 7:15:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L		1.0	1	7/14/2008 8:15:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL-LEACHATE
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02L
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	7/14/2008 4:10:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	34.3	mg/L		1.00	1.0	7/14/2008 4:10:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	10.0	mg/L		1.00	1.0	7/14/2008 4:10:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	45.8	mg/L		1.00	1.0	7/14/2008 4:10:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	9.49	SU		NA	NA	7/14/2008 4:10:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

REI Consultants, Inc. Analytical Results

Date: *20-Apr-09*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: PM-COAL-LEACHATE LAB FILTERED
Project: PL SLURRY
Site ID:

WorkOrder: 0807583 **Lab ID** 0807583-02L
DateReceived: 7/9/2008
Collection Date: 7/8/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.214	mg/L		0.0200	0.100	7/30/2008 12:09:00 AM
Calcium	0.552	mg/L		0.100	0.500	7/30/2008 12:09:00 AM
Iron	0.038	mg/L	J	0.0200	0.100	7/30/2008 12:09:00 AM
Magnesium	ND	mg/L		0.400	0.500	7/30/2008 12:09:00 AM
Manganese	ND	mg/L		0.0010	0.050	7/30/2008 12:09:00 AM
Potassium	0.380	mg/L	J	0.300	1.00	7/30/2008 12:09:00 AM
Silicon	7.59	mg/L		0.0100	0.100	7/30/2008 5:28:00 PM
Sodium	75.5	mg/L		0.100	0.500	7/30/2008 12:09:00 AM
Zinc	ND	mg/L		0.0030	0.050	7/30/2008 12:09:00 AM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0018	mg/L		0.00020	0.0010	7/18/2008 10:16:31 AM
Arsenic	0.0141	mg/L		0.00100	0.0050	7/18/2008 10:16:31 AM
Barium	0.0079	mg/L		0.00100	0.0050	7/18/2008 10:16:31 AM
Beryllium	ND	mg/L		0.00020	0.0010	7/18/2008 10:16:31 AM
Cadmium	ND	mg/L		0.00020	0.0010	7/18/2008 10:16:31 AM
Chromium	ND	mg/L		0.00100	0.0050	7/18/2008 10:16:31 AM
Cobalt	ND	mg/L		0.00100	0.0050	7/18/2008 10:16:31 AM
Copper	ND	mg/L		0.00100	0.0050	7/18/2008 10:16:31 AM
Lead	0.0004	mg/L	J	0.00020	0.0010	7/18/2008 10:16:31 AM
Molybdenum	0.0035	mg/L	J	0.00100	0.0050	7/18/2008 10:16:31 AM
Nickel	ND	mg/L		0.00200	0.0100	7/18/2008 10:16:31 AM
Selenium	0.0082	mg/L		0.00100	0.0050	7/18/2008 10:16:31 AM
Silver	ND	mg/L		0.00020	0.0050	7/18/2008 10:16:31 AM
Strontium	0.0043	mg/L	J	0.00100	0.0050	7/18/2008 10:16:31 AM
Thallium	ND	mg/L		0.00020	0.0010	7/18/2008 10:16:31 AM
Vanadium	0.0052	mg/L	J	0.00100	0.0100	7/18/2008 10:16:31 AM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/14/2008 3:13:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds MCL or Regulatory Limits

Appendix II-P-5

Coresco

REIC

Improving the environment, one client at a time...

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

July 30, 2008

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: CL SLURRY

Order No.: 0806J41

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 3 sample(s) on 6/27/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason A. Clark

Jason Clark
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0806J41**
Date: **7/30/2008**

CLIENT: WV DEP - CHARLESTON
Project: CL SLURRY

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

The results for the DRO (SGT) samples are:

0806J41-01A - ND

0806J41-01S - 655

0806J41-02A - 1040

0806J41-02L - ND

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-SLURRY-LIQUID	**Lab ID:**	0806J41-01A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.644	mg/L		0.0200	0.100	7/8/2008 8:42:00 PM
Calcium	115	mg/L		0.100	0.500	7/8/2008 8:42:00 PM
Iron	0.174	mg/L		0.0200	0.100	7/8/2008 8:42:00 PM
Magnesium	40.0	mg/L		0.400	0.500	7/8/2008 8:42:00 PM
Manganese	0.138	mg/L		0.0010	0.050	7/8/2008 8:42:00 PM
Potassium	5.16	mg/L		0.300	1.00	7/8/2008 8:42:00 PM
Silicon	3.91	mg/L		0.0100	0.100	7/16/2008 9:56:00 AM
Sodium	279	mg/L		0.100	0.500	7/8/2008 8:42:00 PM
Zinc	ND	mg/L		0.0030	0.050	7/8/2008 8:42:00 PM

NOTES:
Initial calibration verification for Mg was just outside method target. Continuing calibration verification was within criteria. The impact on data quality is negligible.

METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0071	mg/L		0.00020	0.0010	7/2/2008 11:02:11 AM
Arsenic	ND	mg/L		0.00100	0.0050	7/2/2008 11:02:11 AM
Barium	0.0713	mg/L		0.00100	0.0050	7/2/2008 11:02:11 AM
Beryllium	ND	mg/L		0.00020	0.0010	7/2/2008 11:02:11 AM
Cadmium	ND	mg/L		0.00020	0.0010	7/2/2008 11:02:11 AM
Chromium	ND	mg/L		0.00100	0.0050	7/2/2008 11:02:11 AM
Cobalt	0.0029	mg/L	J	0.00100	0.0050	7/2/2008 11:02:11 AM
Copper	0.0021	mg/L	J	0.00100	0.0050	7/2/2008 11:02:11 AM
Lead	ND	mg/L		0.00020	0.0010	7/2/2008 11:02:11 AM
Molybdenum	0.0297	mg/L		0.00100	0.0050	7/2/2008 11:02:11 AM
Nickel	0.0074	mg/L	J	0.00200	0.0100	7/2/2008 11:02:11 AM
Selenium	0.0024	mg/L	J	0.00100	0.0050	7/2/2008 11:02:11 AM
Silver	ND	mg/L		0.00020	0.0050	7/2/2008 11:02:11 AM
Strontium	3.27	mg/L		0.00100	0.0050	7/2/2008 11:02:11 AM
Thallium	0.0002	mg/L	J	0.00020	0.0010	7/2/2008 11:02:11 AM
Vanadium	ND	mg/L		0.00100	0.0100	7/2/2008 11:02:11 AM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/1/2008 2:56:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/3/2008 4:02:03 AM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.067	0.16	7/9/2008 5:52:52 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-SLURRY-LIQUID	**Lab ID:**	0806J41-01A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Oil Range)	ND	mg/L		0.035	0.41	7/9/2008 5:52:52 PM
Surr: o-Terphenyl	85.0	%REC			30-130	7/9/2008 5:52:52 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		100	100	7/21/2008
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
Triethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Acenaphthylene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Anthracene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Benzidine	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Benzo(a)anthracene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Benzo(a)pyrene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00975	0.0162	7/7/2008 6:56:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00812	0.0162	7/7/2008 6:56:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2-Chloronaphthalene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2-Chlorophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Chrysene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
o-Cresol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
m,p-Cresol	ND	mg/L		0.00812	0.0325	7/7/2008 6:56:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00487	0.0162	7/7/2008 6:56:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-LIQUID
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01A
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Diethyl phthalate	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Dimethyl phthalate	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00812	0.0162	7/7/2008 6:56:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Fluoranthene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Fluorene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Hexachlorobenzene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Hexachlorobutadiene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Hexachloroethane	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Isophorone	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Naphthalene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Nitrobenzene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2-Nitrophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
4-Nitrophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Pentachlorophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Phenanthrene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Phenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Pyrene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00325	0.0162	7/7/2008 6:56:00 PM
Surr: 2-Fluorophenol	54.6	%REC			21-110	7/7/2008 6:56:00 PM
Surr: Phenol-d5	42.6	%REC			10-110	7/7/2008 6:56:00 PM
Surr: 2,4,6-Tribromophenol	88.9	%REC			10-123	7/7/2008 6:56:00 PM
Surr: Nitrobenzene-d5	85.1	%REC			35-114	7/7/2008 6:56:00 PM
Surr: 2-Fluorobiphenyl	77.4	%REC			43-116	7/7/2008 6:56:00 PM
Surr: 4-Terphenyl-d14	81.5	%REC			33-141	7/7/2008 6:56:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-LIQUID
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01A
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Additional compounds	ND	mg/L		NA	NA	7/7/2008 6:56:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/8/2008 11:14:00 AM
Acrolein	ND	µg/L		4.36	10.0	7/8/2008 11:14:00 AM
Acrylonitrile	ND	µg/L		4.24	10.0	7/8/2008 11:14:00 AM
Benzene	ND	µg/L		0.13	1.0	7/8/2008 11:14:00 AM
Bromobenzene	ND	µg/L		0.25	1.0	7/8/2008 11:14:00 AM
Bromochloromethane	ND	µg/L		0.35	1.0	7/8/2008 11:14:00 AM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/8/2008 11:14:00 AM
Bromoform	ND	µg/L		0.40	1.0	7/8/2008 11:14:00 AM
Bromomethane	ND	µg/L		0.50	1.0	7/8/2008 11:14:00 AM
2-Butanone	ND	µg/L		4.68	10.0	7/8/2008 11:14:00 AM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/8/2008 11:14:00 AM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/8/2008 11:14:00 AM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/8/2008 11:14:00 AM
Carbon disulfide	ND	µg/L		1.27	10.0	7/8/2008 11:14:00 AM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/8/2008 11:14:00 AM
Chlorobenzene	ND	µg/L		0.18	1.0	7/8/2008 11:14:00 AM
Chloroethane	ND	µg/L		0.94	1.0	7/8/2008 11:14:00 AM
Chloroform	ND	µg/L		0.25	1.0	7/8/2008 11:14:00 AM
Chloromethane	ND	µg/L		0.33	1.0	7/8/2008 11:14:00 AM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/8/2008 11:14:00 AM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/8/2008 11:14:00 AM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/8/2008 11:14:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/8/2008 11:14:00 AM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/8/2008 11:14:00 AM
Dibromomethane	ND	µg/L		0.29	1.0	7/8/2008 11:14:00 AM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/8/2008 11:14:00 AM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/8/2008 11:14:00 AM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/8/2008 11:14:00 AM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/8/2008 11:14:00 AM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/8/2008 11:14:00 AM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/8/2008 11:14:00 AM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/8/2008 11:14:00 AM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/8/2008 11:14:00 AM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/8/2008 11:14:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-LIQUID
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01A
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/8/2008 11:14:00 AM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/8/2008 11:14:00 AM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/8/2008 11:14:00 AM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/8/2008 11:14:00 AM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/8/2008 11:14:00 AM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/8/2008 11:14:00 AM
Ethylbenzene	ND	µg/L		0.18	1.0	7/8/2008 11:14:00 AM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/8/2008 11:14:00 AM
2-Hexanone	ND	µg/L		4.11	10.0	7/8/2008 11:14:00 AM
Iodomethane	ND	µg/L		3.44	10.0	7/8/2008 11:14:00 AM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/8/2008 11:14:00 AM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/8/2008 11:14:00 AM
Methylene chloride	ND	µg/L		0.54	1.0	7/8/2008 11:14:00 AM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/8/2008 11:14:00 AM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/8/2008 11:14:00 AM
Naphthalene	ND	µg/L		0.42	1.0	7/8/2008 11:14:00 AM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/8/2008 11:14:00 AM
Styrene	ND	µg/L		0.24	1.0	7/8/2008 11:14:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/8/2008 11:14:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/8/2008 11:14:00 AM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/8/2008 11:14:00 AM
Toluene	ND	µg/L		0.17	1.0	7/8/2008 11:14:00 AM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/8/2008 11:14:00 AM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/8/2008 11:14:00 AM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/8/2008 11:14:00 AM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/8/2008 11:14:00 AM
Trichloroethene	ND	µg/L		0.30	1.0	7/8/2008 11:14:00 AM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/8/2008 11:14:00 AM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/8/2008 11:14:00 AM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/8/2008 11:14:00 AM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/8/2008 11:14:00 AM
Vinyl acetate	ND	µg/L		4.87	10.0	7/8/2008 11:14:00 AM
Vinyl chloride	ND	µg/L		0.22	1.0	7/8/2008 11:14:00 AM
o-Xylene	ND	µg/L		0.19	1.0	7/8/2008 11:14:00 AM
m,p-Xylene	ND	µg/L		0.29	2.0	7/8/2008 11:14:00 AM
Surr: 1,2-Dichloroethane-d4	120	%REC			80-120	7/8/2008 11:14:00 AM
Surr: 4-Bromofluorobenzene	95.9	%REC			86-115	7/8/2008 11:14:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-SLURRY-LIQUID	**Lab ID:**	0806J41-01A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: Dibromofluoromethane	125	%REC	S		80-120	7/8/2008 11:14:00 AM
Surr: Toluene-d8	101	%REC			88-110	7/8/2008 11:14:00 AM
TIC: Additional analytes	ND	µg/L		NA	NA	7/8/2008 11:14:00 AM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/7/2008 12:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	0.83	mg/L		0.050	0.10	6/27/2008 9:37:00 PM
Nitrogen, Nitrite	0.16	mg/L	J	0.050	0.50	6/27/2008 9:37:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	32.8	mg/L		0.100	1.00	7/9/1989 12:30:00 AM
Fluoride	ND	mg/L		0.050	0.20	7/9/1989 12:30:00 AM
Sulfate	1,110	mg/L		0.700	5.00	7/9/1989 12:30:00 AM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.72	mg/L		0.030	0.10	7/3/2008 10:15:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/30/2008 8:00:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	6/30/2008 8:00:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	2,030	µmhos/cm		NA	NA	6/28/2008 12:15:00 PM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	1,340	mg/L		1.0	1	6/30/2008 6:25:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	22	mg/L		1.0	1	6/30/2008 6:20:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	5.4	mg/L		1.00	1.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	143	mg/L		1.00	1.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	ND	mg/L		1.00	1.0	7/8/2008 10:45:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-SLURRY-LIQUID	**Lab ID:**	0806J41-01A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	144	mg/L		1.00	1.0	7/8/2008 10:45:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	7.71	SU		NA	NA	7/8/2008 10:45:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-LIQUID/LAB FILTERED
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01B
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LIQUID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.532	mg/L		0.0200	0.100	7/8/2008 8:47:00 PM
Calcium	111	mg/L		0.100	0.500	7/8/2008 8:47:00 PM
Iron	ND	mg/L		0.0200	0.100	7/8/2008 8:47:00 PM
Magnesium	38.9	mg/L		0.400	0.500	7/8/2008 8:47:00 PM
Manganese	0.133	mg/L		0.0010	0.050	7/8/2008 8:47:00 PM
Potassium	5.01	mg/L		0.300	1.00	7/8/2008 8:47:00 PM
Silicon	1.14	mg/L		0.0100	0.100	7/16/2008 10:01:00 AM
Sodium	272	mg/L		0.100	0.500	7/8/2008 8:47:00 PM
Zinc	ND	mg/L		0.0030	0.050	7/8/2008 8:47:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0069	mg/L		0.00020	0.0010	7/2/2008 11:08:02 AM
Arsenic	ND	mg/L		0.00100	0.0050	7/2/2008 11:08:02 AM
Barium	0.0677	mg/L		0.00100	0.0050	7/2/2008 11:08:02 AM
Beryllium	ND	mg/L		0.00020	0.0010	7/2/2008 11:08:02 AM
Cadmium	ND	mg/L		0.00020	0.0010	7/2/2008 11:08:02 AM
Chromium	ND	mg/L		0.00100	0.0050	7/2/2008 11:08:02 AM
Cobalt	0.0027	mg/L	J	0.00100	0.0050	7/2/2008 11:08:02 AM
Copper	0.0021	mg/L	J	0.00100	0.0050	7/2/2008 11:08:02 AM
Lead	ND	mg/L		0.00020	0.0010	7/2/2008 11:08:02 AM
Molybdenum	0.0290	mg/L		0.00100	0.0050	7/2/2008 11:08:02 AM
Nickel	0.0073	mg/L	J	0.00200	0.0100	7/2/2008 11:08:02 AM
Selenium	0.0024	mg/L	J	0.00100	0.0050	7/2/2008 11:08:02 AM
Silver	ND	mg/L		0.00020	0.0050	7/2/2008 11:08:02 AM
Strontium	3.19	mg/L		0.00100	0.0050	7/2/2008 11:08:02 AM
Thallium	ND	mg/L		0.00020	0.0010	7/2/2008 11:08:02 AM
Vanadium	ND	mg/L		0.00100	0.0100	7/2/2008 11:08:02 AM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/1/2008 2:58:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-SLURRY-SOLID	**Lab ID:**	0806J41-01S
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010B**			Analyst: **JD**
Aluminum	1,420	mg/Kg		0.200	2.50	7/3/2008 3:22:00 PM
Antimony	ND	mg/Kg		1.50	5.00	7/3/2008 3:22:00 PM
Arsenic	4.63	mg/Kg	J	1.50	5.00	7/3/2008 3:22:00 PM
Barium	38.9	mg/Kg		0.100	2.50	7/3/2008 3:22:00 PM
Beryllium	0.525	mg/Kg		0.0200	0.250	7/3/2008 3:22:00 PM
Cadmium	0.145	mg/Kg	J	0.0500	0.500	7/3/2008 3:22:00 PM
Calcium	3,940	mg/Kg		2.50	25.0	7/3/2008 3:22:00 PM
Chromium	7.47	mg/Kg		0.100	2.50	7/7/2008 5:17:00 PM
Cobalt	3.66	mg/Kg		0.100	2.50	7/3/2008 3:22:00 PM
Copper	7.98	mg/Kg		0.200	2.50	7/3/2008 3:22:00 PM
Iron	8,160	mg/Kg		5.00	25.0	7/3/2008 3:25:00 PM
Lead	4.09	mg/Kg	J	0.500	5.00	7/3/2008 3:22:00 PM
Magnesium	584	mg/Kg		2.50	12.0	7/3/2008 3:22:00 PM
Manganese	48.7	mg/Kg		0.0500	2.50	7/3/2008 3:22:00 PM
Molybdenum	0.876	mg/Kg	J	0.200	2.50	7/3/2008 3:22:00 PM
Nickel	7.93	mg/Kg		0.200	2.50	7/3/2008 3:22:00 PM
Potassium	381	mg/Kg		2.50	12.0	7/3/2008 3:22:00 PM
Selenium	0.617	mg/Kg	J	0.500	5.00	7/3/2008 3:22:00 PM
Silicon	70.8	mg/Kg		12.5	62.5	7/13/2008 3:55:00 PM
Silver	ND	mg/Kg		0.100	2.50	7/3/2008 3:22:00 PM
Sodium	394	mg/Kg		2.50	25.0	7/3/2008 3:22:00 PM
Strontium	ND	mg/Kg		0.100	2.50	7/3/2008 3:22:00 PM
Strontium	84.0	mg/Kg		0.100	2.50	7/8/2008 9:59:00 AM
Thallium	ND	mg/Kg		0.500	5.00	7/3/2008 3:22:00 PM
Vanadium	11.0	mg/Kg		0.200	2.50	7/3/2008 3:22:00 PM
Zinc	20.3	mg/Kg		0.200	2.50	7/3/2008 3:22:00 PM
MERCURY, TOTAL			**SW7471A**			Analyst: **JD**
Mercury	0.034	mg/Kg	J	0.0200	0.100	7/2/2008 3:38:00 PM
PERCENT MOISTURE			**SM2540 B**			Analyst: **TM**
Percent Moisture	42	wt%		0.01	0.5	7/14/2008
OIL AND GREASE			**SW9071**			Analyst: **TM**
Oil & Grease, Total Recoverable	0.066	wt%-dry		0.0010	0.010	7/11/2008
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	712	mg/Kg		2.40	3.98	7/10/2008 8:16:08 PM
TPH (Oil Range)	765	mg/Kg		1.04	9.96	7/10/2008 8:16:08 PM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-SLURRY-SOLID	**Lab ID:**	0806J41-01S
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
Surr: o-Terphenyl	108	%REC			30-130	7/10/2008 8:16:08 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Ethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Triethylene Glycol	ND	mg/Kg		100	100	7/18/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Acenaphthylene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Anthracene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Benzidine	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Benzo(a)anthracene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Benzo(a)pyrene	0.747	mg/Kg	J	0.650	3.33	7/10/2008 8:58:00 PM
Benzo(b)fluoranthene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Benzo(g,h,i)perylene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Benzo(k)fluoranthene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/Kg		2.00	3.33	7/10/2008 8:58:00 PM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Butyl benzyl phthalate	ND	mg/Kg		1.50	3.33	7/10/2008 8:58:00 PM
4-Chloro-3-methylphenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2-Chloronaphthalene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2-Chlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Chrysene	0.730	mg/Kg	J	0.650	3.33	7/10/2008 8:58:00 PM
o-Cresol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
m,p-Cresol	ND	mg/Kg		1.08	6.66	7/10/2008 8:58:00 PM
Dibenzo(a,h)anthracene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Di-n-butyl phthalate	ND	mg/Kg		1.50	3.33	7/10/2008 8:58:00 PM
1,2-Dichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
1,3-Dichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
1,4-Dichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
3,3'-Dichlorobenzidine	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2,4-Dichlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Diethyl phthalate	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-SOLID
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01S
Collection Date: 6/26/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Dimethyl phthalate	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2,4-Dimethylphenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2,4-Dinitrophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2,4-Dinitrotoluene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2,6-Dinitrotoluene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Di-n-octyl phthalate	ND	mg/Kg		1.50	3.33	7/10/2008 8:58:00 PM
1,2-Diphenylhydrazine	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Fluoranthene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Fluorene	0.843	mg/Kg	J	0.650	3.33	7/10/2008 8:58:00 PM
Hexachlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Hexachlorobutadiene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Hexachlorocyclopentadiene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Hexachloroethane	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Isophorone	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Naphthalene	4.10	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Nitrobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2-Nitrophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
4-Nitrophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
N-Nitrosodimethylamine	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
N-Nitrosodiphenylamine	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Pentachlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Phenanthrene	4.22	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Phenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Pyrene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2,4,5-Trichlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
2,4,6-Trichlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 8:58:00 PM
Surr: 2-Fluorophenol	81.0	%REC			29.1-120	7/10/2008 8:58:00 PM
Surr: Phenol-d5	76.4	%REC			36.1-163	7/10/2008 8:58:00 PM
Surr: 2,4,6-Tribromophenol	78.2	%REC			35.1-151	7/10/2008 8:58:00 PM
Surr: Nitrobenzene-d5	111	%REC			41.1-132	7/10/2008 8:58:00 PM
Surr: 2-Fluorobiphenyl	94.8	%REC			32.9-121	7/10/2008 8:58:00 PM
Surr: 4-Terphenyl-d14	90.8	%REC			50.9-145	7/10/2008 8:58:00 PM
TIC: Hexadecane	4.00	mg/Kg		NA	NA	7/10/2008 8:58:00 PM

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ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-SOLID
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01S
Collection Date: 6/26/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Naphthalene, 1,4-dimethyl-	4.83	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Naphthalene, 1-methyl-	6.33	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Naphthalene, 2,3-dimethyl-	4.20	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Nonadecane	3.90	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Octadecane	4.10	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Pentacosane	3.83	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Pentadecane	4.10	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Pentadecane, 2,6,10,14-tetramethyl-	3.97	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
TIC: Tricosane	4.57	mg/Kg		NA	NA	7/10/2008 8:58:00 PM
NOTES:						
Elevated PQLs are due to matrix interference.						
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	ND	µg/Kg		167	800	7/2/2008 9:36:00 AM
Acrolein	ND	µg/Kg		160	400	7/2/2008 9:36:00 AM
Acrylonitrile	ND	µg/Kg		127	400	7/2/2008 9:36:00 AM
Carbon disulfide	ND	µg/Kg		32.4	400	7/2/2008 9:36:00 AM
Iodomethane	ND	µg/Kg		55.5	400	7/2/2008 9:36:00 AM
Methyl tert-butyl ether	ND	µg/Kg		27.5	400	7/2/2008 9:36:00 AM
Vinyl acetate	ND	µg/Kg		180	400	7/2/2008 9:36:00 AM
Benzene	ND	µg/Kg		10.0	40.0	7/2/2008 9:36:00 AM
Bromobenzene	ND	µg/Kg		24.3	40.0	7/2/2008 9:36:00 AM
Bromochloromethane	ND	µg/Kg		10.2	40.0	7/2/2008 9:36:00 AM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	7/2/2008 9:36:00 AM
Bromoform	ND	µg/Kg		21.0	40.0	7/2/2008 9:36:00 AM
2-Butanone	ND	µg/Kg		159	400	7/2/2008 9:36:00 AM
Bromomethane	ND	µg/Kg		15.8	40.0	7/2/2008 9:36:00 AM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	7/2/2008 9:36:00 AM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	7/2/2008 9:36:00 AM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	7/2/2008 9:36:00 AM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	7/2/2008 9:36:00 AM
Chlorobenzene	ND	µg/Kg		13.3	40.0	7/2/2008 9:36:00 AM
Chloroethane	ND	µg/Kg		17.1	40.0	7/2/2008 9:36:00 AM
Chloroform	ND	µg/Kg		5.82	40.0	7/2/2008 9:36:00 AM
Chloromethane	ND	µg/Kg		7.52	40.0	7/2/2008 9:36:00 AM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	7/2/2008 9:36:00 AM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	7/2/2008 9:36:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-SOLID
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01S
Collection Date: 6/26/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Dibromochloromethane	ND	µg/Kg		10.7	40.0	7/2/2008 9:36:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	7/2/2008 9:36:00 AM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	7/2/2008 9:36:00 AM
Dibromomethane	ND	µg/Kg		13.3	40.0	7/2/2008 9:36:00 AM
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	7/2/2008 9:36:00 AM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	7/2/2008 9:36:00 AM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	7/2/2008 9:36:00 AM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	7/2/2008 9:36:00 AM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	7/2/2008 9:36:00 AM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	7/2/2008 9:36:00 AM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	7/2/2008 9:36:00 AM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	7/2/2008 9:36:00 AM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	7/2/2008 9:36:00 AM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	7/2/2008 9:36:00 AM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	7/2/2008 9:36:00 AM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	7/2/2008 9:36:00 AM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	7/2/2008 9:36:00 AM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	7/2/2008 9:36:00 AM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	7/2/2008 9:36:00 AM
Ethylbenzene	20.2	µg/Kg	J	13.4	40.0	7/2/2008 9:36:00 AM
2-Hexanone	ND	µg/Kg		79.1	400	7/2/2008 9:36:00 AM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	7/2/2008 9:36:00 AM
Isopropylbenzene	107	µg/Kg		22.6	40.0	7/2/2008 9:36:00 AM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	7/2/2008 9:36:00 AM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	7/2/2008 9:36:00 AM
Methylene chloride	ND	µg/Kg		12.3	40.0	7/2/2008 9:36:00 AM
Naphthalene	ND	µg/Kg		27.7	40.0	7/2/2008 9:36:00 AM
n-Propylbenzene	22.0	µg/Kg	J	13.1	40.0	7/2/2008 9:36:00 AM
Styrene	ND	µg/Kg		10.4	40.0	7/2/2008 9:36:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	7/2/2008 9:36:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	7/2/2008 9:36:00 AM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	7/2/2008 9:36:00 AM
Toluene	64.3	µg/Kg		11.0	40.0	7/2/2008 9:36:00 AM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	7/2/2008 9:36:00 AM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	7/2/2008 9:36:00 AM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	7/2/2008 9:36:00 AM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	7/2/2008 9:36:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-SLURRY-SOLID
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-01S
Collection Date: 6/26/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Trichloroethene	ND	µg/Kg		9.05	40.0	7/2/2008 9:36:00 AM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	7/2/2008 9:36:00 AM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	7/2/2008 9:36:00 AM
1,2,4-Trimethylbenzene	87.9	µg/Kg		17.0	40.0	7/2/2008 9:36:00 AM
1,3,5-Trimethylbenzene	35.4	µg/Kg	J	20.4	40.0	7/2/2008 9:36:00 AM
Vinyl chloride	ND	µg/Kg		10.6	40.0	7/2/2008 9:36:00 AM
o-Xylene	72.6	µg/Kg		13.5	40.0	7/2/2008 9:36:00 AM
m,p-Xylene	71.4	µg/Kg	J	28.3	80.0	7/2/2008 9:36:00 AM
Surr: 1,2-Dichloroethane-d4	104	%REC			72-120	7/2/2008 9:36:00 AM
Surr: 4-Bromofluorobenzene	190	%REC	S		74-121	7/2/2008 9:36:00 AM
Surr: Dibromofluoromethane	119	%REC			75-120	7/2/2008 9:36:00 AM
Surr: Toluene-d8	163	%REC	S		81-117	7/2/2008 9:36:00 AM
TIC: 1,2-dimethyl-trans-cyclohexan	11.3	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: 2-methyl butane	35.8	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: 2-methyl pentane	32.8	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: 3,4-dimethyl-1-pentene	22.5	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: 3-methyl pentane	14.6	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: Cyclohexane	137	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: ethylcyclohexane	19.4	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: hexamethyl cylotrisiloxane	22.2	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: methylcyclohexane	131	µg/Kg		NA	NA	7/2/2008 9:36:00 AM
TIC: methylcyclopentane	23.8	µg/Kg		NA	NA	7/2/2008 9:36:00 AM

NOTES:
Surrogate recovery was not within method criteria due to matrix interference.
Elevated PQLs are due to matrix interference.

CYANIDE			**SW9010/9012A**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	7/9/2008 11:00:00 AM
ANIONS BY 5050/9056			**SW5050/9056**			Analyst: **SB**
Chloride	173	mg/Kg		0.200	100	7/10/2008 9:30:00 AM
Fluoride	90.0	mg/Kg		0.020	0.10	7/10/2008 9:30:00 AM
Nitrogen, Nitrate	2,390	mg/Kg		0.050	0.10	7/10/2008 9:30:00 AM
Nitrogen, Nitrite	251	mg/Kg		0.050	0.50	7/10/2008 9:30:00 AM
Sulfate	18,500	mg/Kg		1.00	5.00	7/10/2008 9:30:00 AM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JL**
Nitrogen, Ammonia	ND	mg/Kg		0.700	50.0	7/9/2008 12:30:00 PM

Key:

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MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-SLURRY-SOLID	**Lab ID:**	0806J41-01S
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	60.6	wt%		0.010	0.01	7/1/2008 6:30:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	4,820	mg/Kg		1.00	20.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	521	mg/Kg		1.00	20.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	5,350	mg/Kg		1.00	20.0	7/8/2008 10:45:00 AM
PH			**SW9045C**			Analyst: **DSA**
pH	9.06	SU		NA	NA	7/8/2008 10:45:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL	**Lab ID:**	0806J41-02A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010B**			Analyst: **JD**
Aluminum	1,820	mg/Kg		0.400	5.00	7/3/2008 2:42:00 PM
Antimony	ND	mg/Kg		3.00	10.0	7/3/2008 2:42:00 PM
Arsenic	10.6	mg/Kg		3.00	10.0	7/3/2008 2:42:00 PM
Barium	34.9	mg/Kg		0.200	5.00	7/3/2008 2:42:00 PM
Beryllium	1.40	mg/Kg		0.0400	0.500	7/3/2008 2:42:00 PM
Cadmium	0.312	mg/Kg	J	0.100	1.00	7/3/2008 2:42:00 PM
Calcium	2,540	mg/Kg		5.00	50.0	7/3/2008 2:42:00 PM
Chromium	10.7	mg/Kg		0.200	5.00	7/7/2008 4:57:00 PM
Cobalt	6.34	mg/Kg		0.200	5.00	7/3/2008 2:42:00 PM
Copper	10.5	mg/Kg		0.400	5.00	7/3/2008 2:42:00 PM
Iron	19,900	mg/Kg		10.0	50.0	7/3/2008 2:55:00 PM
Lead	8.06	mg/Kg	J	1.00	10.0	7/3/2008 2:42:00 PM
Magnesium	704	mg/Kg		5.00	24.0	7/3/2008 2:42:00 PM
Manganese	85.7	mg/Kg		0.100	5.00	7/3/2008 2:42:00 PM
Molybdenum	0.765	mg/Kg	J	0.400	5.00	7/3/2008 2:42:00 PM
Nickel	11.1	mg/Kg		0.400	5.00	7/3/2008 2:42:00 PM
Potassium	555	mg/Kg		5.00	24.0	7/3/2008 2:42:00 PM
Selenium	ND	mg/Kg		1.00	10.0	7/3/2008 2:42:00 PM
Silicon	174	mg/Kg		1.00	5.00	7/13/2008 3:24:00 PM
Silver	ND	mg/Kg		0.200	5.00	7/3/2008 2:42:00 PM
Sodium	415	mg/Kg		5.00	50.0	7/3/2008 2:42:00 PM
Strontium	84.6	mg/Kg		0.200	5.00	7/8/2008 9:49:00 AM
Thallium	ND	mg/Kg		1.00	10.0	7/3/2008 2:42:00 PM
Vanadium	16.5	mg/Kg		0.400	5.00	7/3/2008 2:42:00 PM
Zinc	23.9	mg/Kg		0.400	5.00	7/3/2008 2:42:00 PM

NOTES:

Matrix spike recovery for [Sb and Tl] did not meet REIC control criteria due to matrix interference. Recovery of associated post-digestion spike me REIC control criteria.

MERCURY, TOTAL			**SW7471A**			Analyst: **JD**
Mercury	0.158	mg/Kg		0.0200	0.100	7/2/2008 3:30:00 PM
PERCENT MOISTURE			**SM2540 B**			Analyst: **TM**
Percent Moisture	2.0	wt%		0.01	0.5	7/14/2008
OIL AND GREASE			**SW9071**			Analyst: **TM**
Oil & Grease, Total Recoverable	0.145	wt%-dry		0.0010	0.010	7/11/2008

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL	**Lab ID:**	0806J41-02A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	1,020	mg/Kg		2.41	4.00	7/10/2008 8:50:20 PM
TPH (Oil Range)	740	mg/Kg		1.04	10.0	7/10/2008 8:50:20 PM
Surr: o-Terphenyl	111	%REC			30-130	7/10/2008 8:50:20 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Ethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Triethylene Glycol	ND	mg/Kg		100	100	7/18/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Acenaphthylene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Anthracene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Benzidine	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Benzo(a)anthracene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Benzo(a)pyrene	0.797	mg/Kg	J	0.650	3.33	7/10/2008 9:29:00 PM
Benzo(b)fluoranthene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Benzo(g,h,i)perylene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Benzo(k)fluoranthene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/Kg		2.00	3.33	7/10/2008 9:29:00 PM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Butyl benzyl phthalate	ND	mg/Kg		1.50	3.33	7/10/2008 9:29:00 PM
4-Chloro-3-methylphenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2-Chloronaphthalene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2-Chlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Chrysene	0.873	mg/Kg	J	0.650	3.33	7/10/2008 9:29:00 PM
o-Cresol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
m,p-Cresol	ND	mg/Kg		1.08	6.66	7/10/2008 9:29:00 PM
Dibenzo(a,h)anthracene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Di-n-butyl phthalate	ND	mg/Kg		1.50	3.33	7/10/2008 9:29:00 PM
1,2-Dichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
1,3-Dichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
1,4-Dichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
3,3'-Dichlorobenzidine	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM

Key:			
MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-COAL
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-02A
Collection Date: 6/26/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dichlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Diethyl phthalate	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Dimethyl phthalate	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2,4-Dimethylphenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2,4-Dinitrophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2,4-Dinitrotoluene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2,6-Dinitrotoluene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Di-n-octyl phthalate	ND	mg/Kg		1.50	3.33	7/10/2008 9:29:00 PM
1,2-Diphenylhydrazine	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Fluoranthene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Fluorene	1.14	mg/Kg	J	0.650	3.33	7/10/2008 9:29:00 PM
Hexachlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Hexachlorobutadiene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Hexachlorocyclopentadiene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Hexachloroethane	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Isophorone	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Naphthalene	5.24	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Nitrobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2-Nitrophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
4-Nitrophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
N-Nitrosodimethylamine	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
N-Nitrosodiphenylamine	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Pentachlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Phenanthrene	6.20	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Phenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Pyrene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2,4,5-Trichlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
2,4,6-Trichlorophenol	ND	mg/Kg		0.650	3.33	7/10/2008 9:29:00 PM
Surr: 2-Fluorophenol	67.3	%REC			29.1-120	7/10/2008 9:29:00 PM
Surr: Phenol-d5	64.9	%REC			36.1-163	7/10/2008 9:29:00 PM
Surr: 2,4,6-Tribromophenol	60.7	%REC			35.1-151	7/10/2008 9:29:00 PM
Surr: Nitrobenzene-d5	100	%REC			41.1-132	7/10/2008 9:29:00 PM
Surr: 2-Fluorobiphenyl	82.8	%REC			32.9-121	7/10/2008 9:29:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL	**Lab ID:**	0806J41-02A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Surr: 4-Terphenyl-d14	79.2	%REC			50.9-145	7/10/2008 9:29:00 PM
TIC: Dibenzofuran, 4-methyl-	4.17	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Heptacosane	3.97	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Naphthalene, 1,2-dimethyl-	5.30	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Naphthalene, 1,3-dimethyl-	3.60	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Naphthalene, 1,4-dimethyl-	7.37	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Naphthalene, 1-methyl-	8.10	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Naphthalene, 2,7-dimethyl-	5.10	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Naphthalene-methyl-ethyl-	3.67	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Pentacosane	3.77	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
TIC: Pentadecane, 2,6,10,14-tetramethyl-	4.87	mg/Kg		NA	NA	7/10/2008 9:29:00 PM
NOTES: Elevated PQLs are due to matrix interference.						
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
Acetone	398	µg/Kg	J	167	800	7/2/2008 10:11:00 AM
Acrolein	356	µg/Kg	J	160	400	7/2/2008 10:11:00 AM
Acrylonitrile	ND	µg/Kg		127	400	7/2/2008 10:11:00 AM
Carbon disulfide	ND	µg/Kg		32.4	400	7/2/2008 10:11:00 AM
Iodomethane	ND	µg/Kg		55.5	400	7/2/2008 10:11:00 AM
Methyl tert-butyl ether	ND	µg/Kg		27.5	400	7/2/2008 10:11:00 AM
Vinyl acetate	ND	µg/Kg		180	400	7/2/2008 10:11:00 AM
Benzene	ND	µg/Kg		10.0	40.0	7/2/2008 10:11:00 AM
Bromobenzene	ND	µg/Kg		24.3	40.0	7/2/2008 10:11:00 AM
Bromochloromethane	ND	µg/Kg		10.2	40.0	7/2/2008 10:11:00 AM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	7/2/2008 10:11:00 AM
Bromoform	ND	µg/Kg		21.0	40.0	7/2/2008 10:11:00 AM
2-Butanone	ND	µg/Kg		159	400	7/2/2008 10:11:00 AM
Bromomethane	ND	µg/Kg		15.8	40.0	7/2/2008 10:11:00 AM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	7/2/2008 10:11:00 AM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	7/2/2008 10:11:00 AM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	7/2/2008 10:11:00 AM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	7/2/2008 10:11:00 AM
Chlorobenzene	ND	µg/Kg		13.3	40.0	7/2/2008 10:11:00 AM
Chloroethane	ND	µg/Kg		17.1	40.0	7/2/2008 10:11:00 AM
Chloroform	ND	µg/Kg		5.82	40.0	7/2/2008 10:11:00 AM
Chloromethane	ND	µg/Kg		7.52	40.0	7/2/2008 10:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-COAL
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-02A
Collection Date: 6/26/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	7/2/2008 10:11:00 AM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	7/2/2008 10:11:00 AM
Dibromochloromethane	ND	µg/Kg		10.7	40.0	7/2/2008 10:11:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	7/2/2008 10:11:00 AM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	7/2/2008 10:11:00 AM
Dibromomethane	ND	µg/Kg		13.3	40.0	7/2/2008 10:11:00 AM
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	7/2/2008 10:11:00 AM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	7/2/2008 10:11:00 AM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	7/2/2008 10:11:00 AM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	7/2/2008 10:11:00 AM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	7/2/2008 10:11:00 AM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	7/2/2008 10:11:00 AM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	7/2/2008 10:11:00 AM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	7/2/2008 10:11:00 AM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	7/2/2008 10:11:00 AM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	7/2/2008 10:11:00 AM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	7/2/2008 10:11:00 AM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	7/2/2008 10:11:00 AM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	7/2/2008 10:11:00 AM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	7/2/2008 10:11:00 AM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	7/2/2008 10:11:00 AM
Ethylbenzene	ND	µg/Kg		13.4	40.0	7/2/2008 10:11:00 AM
2-Hexanone	ND	µg/Kg		79.1	400	7/2/2008 10:11:00 AM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	7/2/2008 10:11:00 AM
Isopropylbenzene	162	µg/Kg		22.6	40.0	7/2/2008 10:11:00 AM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	7/2/2008 10:11:00 AM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	7/2/2008 10:11:00 AM
Methylene chloride	ND	µg/Kg		12.3	40.0	7/2/2008 10:11:00 AM
Naphthalene	ND	µg/Kg		27.7	40.0	7/2/2008 10:11:00 AM
n-Propylbenzene	ND	µg/Kg		13.1	40.0	7/2/2008 10:11:00 AM
Styrene	ND	µg/Kg		10.4	40.0	7/2/2008 10:11:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	7/2/2008 10:11:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	7/2/2008 10:11:00 AM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	7/2/2008 10:11:00 AM
Toluene	25.1	µg/Kg	J	11.0	40.0	7/2/2008 10:11:00 AM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	7/2/2008 10:11:00 AM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	7/2/2008 10:11:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL	**Lab ID:**	0806J41-02A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **SDG**
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	7/2/2008 10:11:00 AM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	7/2/2008 10:11:00 AM
Trichloroethene	ND	µg/Kg		9.05	40.0	7/2/2008 10:11:00 AM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	7/2/2008 10:11:00 AM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	7/2/2008 10:11:00 AM
1,2,4-Trimethylbenzene	86.9	µg/Kg		17.0	40.0	7/2/2008 10:11:00 AM
1,3,5-Trimethylbenzene	78.6	µg/Kg		20.4	40.0	7/2/2008 10:11:00 AM
Vinyl chloride	ND	µg/Kg		10.6	40.0	7/2/2008 10:11:00 AM
o-Xylene	66.8	µg/Kg		13.5	40.0	7/2/2008 10:11:00 AM
m,p-Xylene	44.4	µg/Kg	J	28.3	80.0	7/2/2008 10:11:00 AM
Surr: 1,2-Dichloroethane-d4	81.9	%REC			72-120	7/2/2008 10:11:00 AM
Surr: 4-Bromofluorobenzene	213	%REC	S		74-121	7/2/2008 10:11:00 AM
Surr: Dibromofluoromethane	117	%REC			75-120	7/2/2008 10:11:00 AM
Surr: Toluene-d8	182	%REC	S		81-117	7/2/2008 10:11:00 AM
TIC: 1,2-dimethyl-trans-cyclohexan	19.4	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: 2-methyl butane	39.2	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: 2-methyl pentane	45.0	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: 3,4-dimethyl-1-pentene	49.1	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: 3-methyl pentane	20.2	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: Cyclohexane	192	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: ethylcyclohexane	18.7	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: examethyl cylotrisiloxane	25.5	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: methylcyclohexane	181	µg/Kg		NA	NA	7/2/2008 10:11:00 AM
TIC: methylcyclopentane	31.7	µg/Kg		NA	NA	7/2/2008 10:11:00 AM

NOTES:
Surrogate recovery was not within method criteria due to matrix interference.
Elevated PQLs are due to matrix interference.

CYANIDE			**SW9010/9012A**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	7/9/2008 11:00:00 AM
ANIONS BY 5050/9056			**SW5050/9056**			Analyst: **SB**
Chloride	265	mg/Kg		0.200	100	7/10/2008 9:30:00 AM
Fluoride	35.0	mg/Kg		0.020	0.10	7/10/2008 9:30:00 AM
Nitrogen, Nitrate	3,000	mg/Kg		0.050	0.10	7/10/2008 9:30:00 AM
Nitrogen, Nitrite	304	mg/Kg		0.050	0.50	7/10/2008 9:30:00 AM
Sulfate	36,100	mg/Kg		1.00	5.00	7/10/2008 9:30:00 AM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL	**Lab ID:**	0806J41-02A
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JL**
Nitrogen, Ammonia	6.70	mg/Kg	J	0.700	50.0	7/9/2008 12:30:00 PM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	94.5	wt%		0.010	0.01	6/30/2008 6:00:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	1,700	mg/Kg		1.00	10.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	358	mg/Kg		1.00	10.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	2,060	mg/Kg		1.00	10.0	7/8/2008 10:45:00 AM
PH			**SW9045C**			Analyst: **DSA**
pH	9.35	SU		NA	NA	7/8/2008 10:45:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-COAL-LEACHATE
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-02L
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/10/2008 2:15:47 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.051	0.12	7/9/2008 6:27:14 PM
TPH (Oil Range)	ND	mg/L		0.027	0.31	7/9/2008 6:27:14 PM
Surr: o-Terphenyl	95.6	%REC			30-130	7/9/2008 6:27:14 PM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/L		100	100	7/21/2008
Monoethylene Glycol	ND	mg/L		100	100	7/21/2008
Triethylene Glycol	ND	mg/L		100	100	7/21/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Acenaphthylene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Anthracene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Benzidine	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Benzo(a)anthracene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Benzo(a)pyrene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Bis(2-ethylhexyl)phthalate	ND	mg/L		0.00724	0.0121	7/7/2008 5:24:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00604	0.0121	7/7/2008 5:24:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2-Chloronaphthalene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2-Chlorophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Chrysene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
o-Cresol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
m,p-Cresol	ND	mg/L		0.00604	0.0241	7/7/2008 5:24:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00362	0.0121	7/7/2008 5:24:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-COAL-LEACHATE
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-02L
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
1,3-Dichlorobenzene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
3,3'-Dichlorobenzidine	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2,4-Dichlorophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Diethyl phthalate	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Dimethyl phthalate	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00604	0.0121	7/7/2008 5:24:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Fluoranthene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Fluorene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Hexachlorobenzene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Hexachlorobutadiene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Hexachloroethane	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Isophorone	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Naphthalene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Nitrobenzene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2-Nitrophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
4-Nitrophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Pentachlorophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Phenanthrene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Phenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Pyrene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00241	0.0121	7/7/2008 5:24:00 PM
Surr: 2-Fluorophenol	44.6	%REC			21-110	7/7/2008 5:24:00 PM
Surr: Phenol-d5	31.8	%REC			10-110	7/7/2008 5:24:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-COAL-LEACHATE
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-02L
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Surr: 2,4,6-Tribromophenol	78.8	%REC			10-123	7/7/2008 5:24:00 PM
Surr: Nitrobenzene-d5	73.8	%REC			35-114	7/7/2008 5:24:00 PM
Surr: 2-Fluorobiphenyl	63.7	%REC			43-116	7/7/2008 5:24:00 PM
Surr: 4-Terphenyl-d14	77.7	%REC			33-141	7/7/2008 5:24:00 PM
TIC: Additional compounds	ND	mg/L		NA	NA	7/7/2008 5:24:00 PM

NOTES:
Insufficient sample was available to prepare and analyze a matrix spiked quality control sample. Accuracy assessment was based on a lab contro sample.

VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/7/2008 4:17:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/7/2008 4:17:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/7/2008 4:17:00 PM
Benzene	ND	µg/L		0.13	1.0	7/7/2008 4:17:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/7/2008 4:17:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/7/2008 4:17:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/7/2008 4:17:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/7/2008 4:17:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/7/2008 4:17:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/7/2008 4:17:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/7/2008 4:17:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/7/2008 4:17:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/7/2008 4:17:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/7/2008 4:17:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/7/2008 4:17:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/7/2008 4:17:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/7/2008 4:17:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/7/2008 4:17:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/7/2008 4:17:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/7/2008 4:17:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/7/2008 4:17:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/7/2008 4:17:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/7/2008 4:17:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/7/2008 4:17:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/7/2008 4:17:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/7/2008 4:17:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/7/2008 4:17:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/7/2008 4:17:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: CL-COAL-LEACHATE
Project: CL SLURRY
Site ID:

WorkOrder: 0806J41
Lab ID: 0806J41-02L
Collection Date: 6/26/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/7/2008 4:17:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/7/2008 4:17:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/7/2008 4:17:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/7/2008 4:17:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/7/2008 4:17:00 PM
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/7/2008 4:17:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/7/2008 4:17:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/7/2008 4:17:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/7/2008 4:17:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/7/2008 4:17:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/7/2008 4:17:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/7/2008 4:17:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/7/2008 4:17:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/7/2008 4:17:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/7/2008 4:17:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/7/2008 4:17:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/7/2008 4:17:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/7/2008 4:17:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/7/2008 4:17:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/7/2008 4:17:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/7/2008 4:17:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/7/2008 4:17:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/7/2008 4:17:00 PM
Styrene	ND	µg/L		0.24	1.0	7/7/2008 4:17:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/7/2008 4:17:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/7/2008 4:17:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/7/2008 4:17:00 PM
Toluene	ND	µg/L		0.17	1.0	7/7/2008 4:17:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/7/2008 4:17:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/7/2008 4:17:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/7/2008 4:17:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/7/2008 4:17:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/7/2008 4:17:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/7/2008 4:17:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/7/2008 4:17:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/7/2008 4:17:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/7/2008 4:17:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL-LEACHATE	**Lab ID:**	0806J41-02L
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Vinyl acetate	ND	µg/L		4.87	10.0	7/7/2008 4:17:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/7/2008 4:17:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/7/2008 4:17:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/7/2008 4:17:00 PM
Surr: 1,2-Dichloroethane-d4	111	%REC			80-120	7/7/2008 4:17:00 PM
Surr: 4-Bromofluorobenzene	97.9	%REC			86-115	7/7/2008 4:17:00 PM
Surr: Dibromofluoromethane	115	%REC			80-120	7/7/2008 4:17:00 PM
Surr: Toluene-d8	104	%REC			88-110	7/7/2008 4:17:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/7/2008 4:17:00 PM
IRON RELATED BACTERIA			**HACH-BART**			Analyst: **DSA**
Iron Related Bacteria	ND	CFU/mL		NA	100	6/27/2008 7:40:00 AM
SULFATE REDUCING BACTERIA			**HACH-BART**			Analyst: **SB**
Sulfate Reducing Bacteria	5,500	CFU/mL		NA	100	6/27/2008 7:40:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/7/2008 12:00:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	6/27/2008 9:37:00 PM
Nitrogen, Nitrite	ND	mg/L		0.050	0.50	6/27/2008 9:37:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	0.60	mg/L	J	0.100	1.00	7/8/2008 4:22:00 PM
Fluoride	ND	mg/L		0.050	0.20	7/8/2008 4:22:00 PM
Sulfate	14.0	mg/L		0.700	5.00	7/8/2008 4:22:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.14	mg/L		0.030	0.10	7/3/2008 10:15:00 AM
OIL AND GREASE			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	7/9/2008 10:00:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JL**
Oil & Grease	ND	mg/L		2.00	5.0	7/9/2008 10:00:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	116	µmhos/cm		NA	NA	7/3/2008 6:00:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL-LEACHATE	**Lab ID:**	0806J41-02L
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	51	mg/L		1.0	1	7/3/2008 6:00:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L		1.0	1	7/3/2008 7:00:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	32.1	mg/L		1.00	1.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	6.8	mg/L		1.00	1.0	7/8/2008 10:45:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	40.0	mg/L		1.00	1.0	7/8/2008 10:45:00 AM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	9.35	SU		NA	NA	7/8/2008 10:45:00 AM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *04-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0806J41
Client Sample ID:	CL-COAL-LEACHATE LAB FILTERED	**Lab ID:**	0806J41-02LB
Project:	CL SLURRY	**Collection Date:**	6/26/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **JD**
Aluminum	0.356	mg/L		0.0050	0.100	7/2/2008 2:10:00 PM
Calcium	4.82	mg/L		0.0500	1.00	7/2/2008 2:10:00 PM
Iron	0.022	mg/L	J	0.0200	0.100	7/2/2008 2:10:00 PM
Magnesium	0.287	mg/L	J	0.0500	0.500	7/2/2008 2:10:00 PM
Manganese	ND	mg/L		0.0010	0.050	7/2/2008 2:10:00 PM
Potassium	1.08	mg/L		0.0500	0.500	7/2/2008 2:10:00 PM
Silicon	0.429	mg/L		0.0100	0.100	7/13/2008 2:52:00 PM
Sodium	12.6	mg/L		0.0500	1.00	7/2/2008 2:10:00 PM
Zinc	0.003	mg/L	J	0.0030	0.050	7/2/2008 2:10:00 PM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0005	mg/L	J	0.00020	0.0010	7/2/2008 1:22:36 PM
Arsenic	0.0019	mg/L	J	0.00100	0.0050	7/2/2008 1:22:36 PM
Barium	0.0047	mg/L	J	0.00100	0.0050	7/2/2008 1:22:36 PM
Beryllium	ND	mg/L		0.00020	0.0010	7/2/2008 1:22:36 PM
Cadmium	ND	mg/L		0.00020	0.0010	7/2/2008 1:22:36 PM
Chromium	ND	mg/L		0.00100	0.0050	7/2/2008 1:22:36 PM
Cobalt	ND	mg/L		0.00100	0.0050	7/2/2008 1:22:36 PM
Copper	ND	mg/L		0.00100	0.0050	7/2/2008 1:22:36 PM
Lead	ND	mg/L		0.00020	0.0010	7/2/2008 1:22:36 PM
Molybdenum	0.0020	mg/L	J	0.00100	0.0050	7/2/2008 1:22:36 PM
Nickel	ND	mg/L		0.00200	0.0100	7/2/2008 1:22:36 PM
Selenium	0.0019	mg/L	J	0.00100	0.0050	7/2/2008 1:22:36 PM
Silver	ND	mg/L		0.00020	0.0050	7/2/2008 1:22:36 PM
Strontium	0.164	mg/L		0.00100	0.0050	7/2/2008 1:22:36 PM
Thallium	ND	mg/L		0.00020	0.0010	7/2/2008 1:22:36 PM
Vanadium	0.0015	mg/L	J	0.00100	0.0100	7/2/2008 1:22:36 PM
MERCURY, TOTAL			**E245.1**			Analyst: **JD**
Mercury	ND	mg/L		0.00010	0.0010	7/2/2008 2:57:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

Appendix II-P-6

Marfork

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

August 06, 2008

Mr. Nick Schaer
WV DEP - CHARLESTON
601 57th ST SE
CHARLESTON WV 25304

TEL: (304) 926-0499
FAX (304) 926-0457

RE: MF-SLURRY

Order No.: 0807680

Dear Mr. Nick Schaer:

REI Consultants, Inc. received 3 sample(s) on 7/10/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Jason A. Clark

Jason Clark
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: **Jason Clark**

WO#: **0807680**
Date: **8/6/2008**

CLIENT: WV DEP - CHARLESTON
Project: MF-SLURRY

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

If you have any questions please contact the project manager whose name is listed above.

The results for the DRO (SGT) samples are:

0807680-01A - 172

0807680-02A - 720

0807680-02L - ND

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-SLURRY
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-01A
Collection Date: 7/10/2008 10:30:00 AM
Matrix: SLURRY

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010B**			Analyst: **JD**
Aluminum	3,130	mg/Kg		0.400	5.00	7/14/2008 12:25:00 PM
Antimony	ND	mg/Kg		3.00	10.0	7/14/2008 12:25:00 PM
Arsenic	ND	mg/Kg		3.00	10.0	7/14/2008 12:25:00 PM
Barium	304	mg/Kg		0.200	5.00	7/14/2008 12:25:00 PM
Cadmium	0.123	mg/Kg	J	0.100	1.00	7/14/2008 12:25:00 PM
Calcium	719	mg/Kg		5.00	50.0	7/14/2008 12:25:00 PM
Chromium	5.55	mg/Kg		0.200	5.00	7/14/2008 12:25:00 PM
Cobalt	3.81	mg/Kg	J	0.200	5.00	7/14/2008 12:25:00 PM
Copper	10.8	mg/Kg		0.400	5.00	7/14/2008 12:25:00 PM
Iron	7,000	mg/Kg		10.0	50.0	7/14/2008 12:35:00 PM
Lead	5.86	mg/Kg	J	1.00	10.0	7/14/2008 12:25:00 PM
Magnesium	1,260	mg/Kg		5.00	24.0	7/14/2008 12:25:00 PM
Manganese	72.9	mg/Kg		0.100	5.00	7/14/2008 12:25:00 PM
Molybdenum	ND	mg/Kg		0.400	5.00	7/14/2008 12:25:00 PM
Nickel	7.68	mg/Kg		0.400	5.00	7/14/2008 12:25:00 PM
Potassium	1,280	mg/Kg		5.00	24.0	7/14/2008 12:25:00 PM
Selenium	ND	mg/Kg		1.00	10.0	7/14/2008 12:25:00 PM
Silicon	317	mg/Kg		2.50	12.5	8/5/2008
Silver	ND	mg/Kg		0.200	5.00	7/14/2008 12:25:00 PM
Sodium	315	mg/Kg		5.00	50.0	7/14/2008 12:25:00 PM
Strontium	34.6	mg/Kg		0.200	5.00	7/15/2008 1:38:00 PM
Thallium	ND	mg/Kg		1.00	10.0	7/14/2008 12:25:00 PM
Vanadium	8.22	mg/Kg		0.400	5.00	7/14/2008 12:25:00 PM
Zinc	18.7	mg/Kg		0.400	5.00	7/14/2008 12:25:00 PM
MERCURY, TOTAL			**SW7471A**			Analyst: **DL**
Mercury	ND	mg/Kg		0.0100	0.050	7/14/2008 4:25:00 PM
OIL AND GREASE			**SW9071**			Analyst: **TM**
Oil & Grease, Total Recoverable	0.176	wt%-dry		0.0010	0.010	7/23/2008
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	179	mg/Kg		4.82	8.00	7/19/2008 4:23:26 AM
TPH (Oil Range)	258	mg/Kg		2.08	20.0	7/19/2008 4:23:26 AM
Surr: o-Terphenyl	83.2	%REC			30-130	7/19/2008 4:23:26 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Ethylene Glycol	ND	mg/Kg		100	100	7/18/2008

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-SLURRY
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-01A
Collection Date: 7/10/2008 10:30:00 AM
Matrix: SLURRY

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Triethylene Glycol	ND	mg/Kg		100	100	7/18/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Acenaphthylene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Anthracene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Benzidine	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Benzo(a)anthracene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Benzo(a)pyrene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Benzo(b)fluoranthene	0.087	mg/Kg	J	0.0646	0.331	7/15/2008 1:29:00 AM
Benzo(g,h,i)perylene	0.098	mg/Kg	J	0.0646	0.331	7/15/2008 1:29:00 AM
Benzo(k)fluoranthene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Bis(2-ethylhexyl)phthalate	ND	mg/Kg		0.199	0.331	7/15/2008 1:29:00 AM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Butyl benzyl phthalate	ND	mg/Kg		0.149	0.331	7/15/2008 1:29:00 AM
4-Chloro-3-methylphenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2-Chloronaphthalene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2-Chlorophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Chrysene	0.320	mg/Kg	J	0.0646	0.331	7/15/2008 1:29:00 AM
o-Cresol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
m,p-Cresol	ND	mg/Kg		0.107	0.662	7/15/2008 1:29:00 AM
Dibenzo(a,h)anthracene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Di-n-butyl phthalate	ND	mg/Kg		0.149	0.331	7/15/2008 1:29:00 AM
1,2-Dichlorobenzene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
1,3-Dichlorobenzene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
1,4-Dichlorobenzene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
3,3´-Dichlorobenzidine	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2,4-Dichlorophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Diethyl phthalate	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Dimethyl phthalate	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2,4-Dimethylphenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2,4-Dinitrophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-SLURRY
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-01A
Collection Date: 7/10/2008 10:30:00 AM
Matrix: SLURRY

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dinitrotoluene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2,6-Dinitrotoluene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Di-n-octyl phthalate	ND	mg/Kg		0.149	0.331	7/15/2008 1:29:00 AM
1,2-Diphenylhydrazine	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Fluoranthene	0.096	mg/Kg	J	0.0646	0.331	7/15/2008 1:29:00 AM
Fluorene	0.135	mg/Kg	J	0.0646	0.331	7/15/2008 1:29:00 AM
Hexachlorobenzene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Hexachlorobutadiene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Hexachlorocyclopentadiene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Hexachloroethane	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Indeno(1,2,3-cd)pyrene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Isophorone	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Naphthalene	0.234	mg/Kg	J	0.0646	0.331	7/15/2008 1:29:00 AM
Nitrobenzene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2-Nitrophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
4-Nitrophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
N-Nitrosodimethylamine	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
N-Nitrosodiphenylamine	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Pentachlorophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Phenanthrene	0.604	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Phenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Pyrene	0.121	mg/Kg	J	0.0646	0.331	7/15/2008 1:29:00 AM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2,4,5-Trichlorophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
2,4,6-Trichlorophenol	ND	mg/Kg		0.0646	0.331	7/15/2008 1:29:00 AM
Surr: 2-Fluorophenol	76.3	%REC			29.1-120	7/15/2008 1:29:00 AM
Surr: Phenol-d5	71.1	%REC			36.1-163	7/15/2008 1:29:00 AM
Surr: 2,4,6-Tribromophenol	86.7	%REC			35.1-151	7/15/2008 1:29:00 AM
Surr: Nitrobenzene-d5	91.9	%REC			41.1-132	7/15/2008 1:29:00 AM
Surr: 2-Fluorobiphenyl	89.3	%REC			32.9-121	7/15/2008 1:29:00 AM
Surr: 4-Terphenyl-d14	77.4	%REC			50.9-145	7/15/2008 1:29:00 AM
TIC: Butane, 1,1-dibutoxy-	1.31	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Dodecane	1.94	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Hexadeacne	1.12	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Octadecane	1.05	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Oxirane, tetramethyl-	0.927	mg/Kg		NA	NA	7/15/2008 1:29:00 AM

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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-SLURRY	**Lab ID:**	0807680-01A
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 10:30:00 AM
Site ID:		**Matrix:**	SLURRY

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Pentadecane	1.30	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Propanoic acid, 2-methyl-, 2-ethyl-	1.49	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Tridecane	1.86	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Tridecane, 5-propyl-	0.967	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
TIC: Tridecane, 7-methyl-	1.68	mg/Kg		NA	NA	7/15/2008 1:29:00 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/Kg		167	800	7/18/2008 10:53:00 AM
Acrolein	ND	µg/Kg		160	400	7/18/2008 10:53:00 AM
Acrylonitrile	ND	µg/Kg		127	400	7/18/2008 10:53:00 AM
Carbon disulfide	ND	µg/Kg		32.4	400	7/18/2008 10:53:00 AM
Iodomethane	ND	µg/Kg		55.5	400	7/18/2008 10:53:00 AM
Methyl tert-butyl ether	ND	µg/Kg		27.5	400	7/18/2008 10:53:00 AM
Vinyl acetate	ND	µg/Kg		180	400	7/18/2008 10:53:00 AM
Benzene	ND	µg/Kg		10.0	40.0	7/18/2008 10:53:00 AM
Bromobenzene	ND	µg/Kg		24.3	40.0	7/18/2008 10:53:00 AM
Bromochloromethane	ND	µg/Kg		10.2	40.0	7/18/2008 10:53:00 AM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	7/18/2008 10:53:00 AM
Bromoform	ND	µg/Kg		21.0	40.0	7/18/2008 10:53:00 AM
2-Butanone	ND	µg/Kg		159	400	7/18/2008 10:53:00 AM
Bromomethane	ND	µg/Kg		15.8	40.0	7/18/2008 10:53:00 AM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	7/18/2008 10:53:00 AM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	7/18/2008 10:53:00 AM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	7/18/2008 10:53:00 AM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	7/18/2008 10:53:00 AM
Chlorobenzene	ND	µg/Kg		13.3	40.0	7/18/2008 10:53:00 AM
Chloroethane	ND	µg/Kg		17.1	40.0	7/18/2008 10:53:00 AM
Chloroform	ND	µg/Kg		5.82	40.0	7/18/2008 10:53:00 AM
Chloromethane	ND	µg/Kg		7.52	40.0	7/18/2008 10:53:00 AM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	7/18/2008 10:53:00 AM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	7/18/2008 10:53:00 AM
Dibromochloromethane	ND	µg/Kg		10.7	40.0	7/18/2008 10:53:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	7/18/2008 10:53:00 AM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	7/18/2008 10:53:00 AM
Dibromomethane	ND	µg/Kg		13.3	40.0	7/18/2008 10:53:00 AM
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	7/18/2008 10:53:00 AM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	7/18/2008 10:53:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-SLURRY
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-01A
Collection Date: 7/10/2008 10:30:00 AM
Matrix: SLURRY

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	7/18/2008 10:53:00 AM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	7/18/2008 10:53:00 AM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	7/18/2008 10:53:00 AM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	7/18/2008 10:53:00 AM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	7/18/2008 10:53:00 AM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	7/18/2008 10:53:00 AM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	7/18/2008 10:53:00 AM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	7/18/2008 10:53:00 AM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	7/18/2008 10:53:00 AM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	7/18/2008 10:53:00 AM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	7/18/2008 10:53:00 AM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	7/18/2008 10:53:00 AM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	7/18/2008 10:53:00 AM
Ethylbenzene	ND	µg/Kg		13.4	40.0	7/18/2008 10:53:00 AM
2-Hexanone	ND	µg/Kg		79.1	400	7/18/2008 10:53:00 AM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	7/18/2008 10:53:00 AM
Isopropylbenzene	34.4	µg/Kg	J	22.6	40.0	7/18/2008 10:53:00 AM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	7/18/2008 10:53:00 AM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	7/18/2008 10:53:00 AM
Methylene chloride	ND	µg/Kg		12.3	40.0	7/18/2008 10:53:00 AM
Naphthalene	40.4	µg/Kg		27.7	40.0	7/18/2008 10:53:00 AM
n-Propylbenzene	ND	µg/Kg		13.1	40.0	7/18/2008 10:53:00 AM
Styrene	ND	µg/Kg		10.4	40.0	7/18/2008 10:53:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	7/18/2008 10:53:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	7/18/2008 10:53:00 AM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	7/18/2008 10:53:00 AM
Toluene	ND	µg/Kg		11.0	40.0	7/18/2008 10:53:00 AM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	7/18/2008 10:53:00 AM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	7/18/2008 10:53:00 AM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	7/18/2008 10:53:00 AM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	7/18/2008 10:53:00 AM
Trichloroethene	ND	µg/Kg		9.05	40.0	7/18/2008 10:53:00 AM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	7/18/2008 10:53:00 AM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	7/18/2008 10:53:00 AM
1,2,4-Trimethylbenzene	26.7	µg/Kg	J	17.0	40.0	7/18/2008 10:53:00 AM
1,3,5-Trimethylbenzene	22.6	µg/Kg	J	20.4	40.0	7/18/2008 10:53:00 AM
Vinyl chloride	ND	µg/Kg		10.6	40.0	7/18/2008 10:53:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-SLURRY	**Lab ID:**	0807680-01A
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 10:30:00 AM
Site ID:		**Matrix:**	SLURRY

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
o-Xylene	ND	µg/Kg		13.5	40.0	7/18/2008 10:53:00 AM
m,p-Xylene	ND	µg/Kg		28.3	80.0	7/18/2008 10:53:00 AM
Surr: 1,2-Dichloroethane-d4	96.2	%REC			72-120	7/18/2008 10:53:00 AM
Surr: 4-Bromofluorobenzene	161	%REC	S		74-121	7/18/2008 10:53:00 AM
Surr: Dibromofluoromethane	124	%REC	S		75-120	7/18/2008 10:53:00 AM
Surr: Toluene-d8	159	%REC	S		81-117	7/18/2008 10:53:00 AM
TIC: 3,5-dichloro-2,6-dimethyl-4-pyridinol	28.1	µg/Kg		NA	NA	7/18/2008 10:53:00 AM
TIC: butanal	14.8	µg/Kg		NA	NA	7/18/2008 10:53:00 AM
TIC: hexamethyl cyclotrisiloxane	20.6	µg/Kg		NA	NA	7/18/2008 10:53:00 AM

NOTES:
Surrogate recovery was not within method criteria due to matrix interference.
Elevated PQLs are due to matrix interference.

CYANIDE			**SW9010/9012A**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	7/16/2008 12:15:00 PM
ANIONS BY IC, WATER SOLUBLE			**SW9056**			Analyst: **SB**
Chloride	173	mg/Kg		1.00	1.00	7/21/2008 3:33:00 PM
Fluoride	ND	mg/Kg		1.00	1.00	7/21/2008 3:33:00 PM
Nitrogen, Nitrate	ND	mg/Kg		1.00	1.00	7/21/2008 3:33:00 PM
Nitrogen, Nitrite	ND	mg/Kg		1.00	5.00	7/21/2008 3:33:00 PM
Sulfate	191	mg/Kg		1.00	50.0	7/21/2008 3:33:00 PM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JJ**
Nitrogen, Ammonia	25.8	mg/Kg		7.00	10.0	7/21/2008 4:00:00 PM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	18.2	wt%		0.010	0.01	7/11/2008 6:50:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	843	mg/L		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	5.7	mg/kg		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	848	mg/Kg		1.00	10.0	7/11/2008 4:25:00 PM
PH			**SW9045C**			Analyst: **DSA**
pH	7.86	SU		NA	NA	7/11/2008 4:25:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
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	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-COAL
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-02A
Collection Date: 7/10/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**SW6010B**			Analyst: **JD**
Aluminum	8,720	mg/Kg		4.00	50.0	7/14/2008 12:42:00 PM
Antimony	ND	mg/Kg		3.00	10.0	7/14/2008 12:38:00 PM
Arsenic	159	mg/Kg		3.00	10.0	7/14/2008 12:38:00 PM
Barium	152	mg/Kg		0.200	5.00	7/14/2008 12:38:00 PM
Cadmium	0.445	mg/Kg	J	0.100	1.00	7/14/2008 12:38:00 PM
Calcium	951	mg/Kg		5.00	50.0	7/14/2008 12:38:00 PM
Chromium	13.9	mg/Kg		0.200	5.00	7/14/2008 12:38:00 PM
Cobalt	11.2	mg/Kg		0.200	5.00	7/14/2008 12:38:00 PM
Copper	27.4	mg/Kg		0.400	5.00	7/14/2008 12:38:00 PM
Iron	28,200	mg/Kg		10.0	50.0	7/14/2008 12:42:00 PM
Lead	16.2	mg/Kg		1.00	10.0	7/14/2008 12:38:00 PM
Magnesium	2,680	mg/Kg		5.00	24.0	7/14/2008 12:38:00 PM
Manganese	183	mg/Kg		0.100	5.00	7/14/2008 12:38:00 PM
Molybdenum	1.62	mg/Kg	J	0.400	5.00	7/14/2008 12:38:00 PM
Nickel	21.5	mg/Kg		0.400	5.00	7/14/2008 12:38:00 PM
Potassium	2,180	mg/Kg		5.00	24.0	7/14/2008 12:38:00 PM
Selenium	1.17	mg/Kg	J	1.00	10.0	7/14/2008 12:38:00 PM
Silicon	321	mg/Kg		2.50	12.5	8/5/2008
Silver	ND	mg/Kg		0.200	5.00	7/14/2008 12:38:00 PM
Sodium	593	mg/Kg		5.00	50.0	7/14/2008 12:38:00 PM
Strontium	61.4	mg/Kg		0.200	5.00	7/15/2008 1:41:00 PM
Thallium	ND	mg/Kg		1.00	10.0	7/14/2008 12:38:00 PM
Vanadium	16.8	mg/Kg		0.400	5.00	7/14/2008 12:38:00 PM
Zinc	49.1	mg/Kg		0.400	5.00	7/14/2008 12:38:00 PM
MERCURY, TOTAL			**SW7471A**			Analyst: **DL**
Mercury	0.254	mg/Kg		0.0100	0.050	7/14/2008 4:26:00 PM
OIL AND GREASE			**SW9071**			Analyst: **TM**
Oil & Grease, Total Recoverable	0.073	wt%-dry		0.0010	0.010	7/23/2008
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	535	mg/Kg		24.1	40.0	7/19/2008 4:57:34 AM
TPH (Oil Range)	640	mg/Kg		10.4	100	7/19/2008 4:57:34 AM
Surr: o-Terphenyl	125	%REC			30-130	7/19/2008 4:57:34 AM
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Diethylene Glycol	ND	mg/Kg		100	100	7/18/2008
Ethylene Glycol	ND	mg/Kg		100	100	7/18/2008

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-COAL
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-02A
Collection Date: 7/10/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
GLYCOLS, TOTAL			**GC-FID**			Analyst: **TM**
Triethylene Glycol	ND	mg/Kg		100	100	7/18/2008
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Acenaphthene	0.197	mg/Kg	J	0.0650	0.333	7/15/2008 1:59:00 AM
Acenaphthylene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Anthracene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Benzidine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Benzo(a)anthracene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Benzo(a)pyrene	0.231	mg/Kg	J	0.0650	0.333	7/15/2008 1:59:00 AM
Benzo(b)fluoranthene	0.227	mg/Kg	J	0.0650	0.333	7/15/2008 1:59:00 AM
Benzo(g,h,i)perylene	0.420	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Benzo(k)fluoranthene	0.213	mg/Kg	J	0.0650	0.333	7/15/2008 1:59:00 AM
Bis(2-chloroethoxy)methane	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Bis(2-chloroethyl)ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Bis(2-chloroisopropyl)ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Bis(2-ethylhexyl)phthalate	0.227	mg/Kg	J	0.200	0.333	7/15/2008 1:59:00 AM
4-Bromophenyl phenyl ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Butyl benzyl phthalate	ND	mg/Kg		0.150	0.333	7/15/2008 1:59:00 AM
4-Chloro-3-methylphenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2-Chloronaphthalene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2-Chlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
4-Chlorophenyl phenyl ether	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Chrysene	1.10	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
o-Cresol	0.229	mg/Kg	J	0.0650	0.333	7/15/2008 1:59:00 AM
m,p-Cresol	0.151	mg/Kg	J	0.108	0.666	7/15/2008 1:59:00 AM
Dibenzo(a,h)anthracene	0.132	mg/Kg	J	0.0650	0.333	7/15/2008 1:59:00 AM
Di-n-butyl phthalate	ND	mg/Kg		0.150	0.333	7/15/2008 1:59:00 AM
1,2-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
1,3-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
1,4-Dichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
3,3´-Dichlorobenzidine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2,4-Dichlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Diethyl phthalate	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Dimethyl phthalate	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2,4-Dimethylphenol	0.424	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
4,6-Dinitro-2-methylphenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2,4-Dinitrophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-COAL
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-02A
Collection Date: 7/10/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dinitrotoluene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2,6-Dinitrotoluene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Di-n-octyl phthalate	ND	mg/Kg		0.150	0.333	7/15/2008 1:59:00 AM
1,2-Diphenylhydrazine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Fluoranthene	0.348	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Fluorene	1.04	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Hexachlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Hexachlorobutadiene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Hexachlorocyclopentadiene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Hexachloroethane	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Indeno(1,2,3-cd)pyrene	0.080	mg/Kg	J	0.0650	0.333	7/15/2008 1:59:00 AM
Isophorone	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Naphthalene	4.80	mg/Kg		0.650	3.33	7/17/2008 5:37:00 PM
Nitrobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2-Nitrophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
4-Nitrophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
N-Nitrosodimethylamine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
N-Nitrosodiphenylamine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
N-Nitrosodi-n-propylamine	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Pentachlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Phenanthrene	4.76	mg/Kg		0.650	3.33	7/17/2008 5:37:00 PM
Phenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Pyrene	0.462	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
1,2,4-Trichlorobenzene	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2,4,5-Trichlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
2,4,6-Trichlorophenol	ND	mg/Kg		0.0650	0.333	7/15/2008 1:59:00 AM
Surr: 2-Fluorophenol	84.9	%REC			29.1-120	7/15/2008 1:59:00 AM
Surr: Phenol-d5	80.9	%REC			36.1-163	7/15/2008 1:59:00 AM
Surr: 2,4,6-Tribromophenol	80.1	%REC			35.1-151	7/15/2008 1:59:00 AM
Surr: Nitrobenzene-d5	114	%REC			41.1-132	7/15/2008 1:59:00 AM
Surr: 2-Fluorobiphenyl	109	%REC			32.9-121	7/15/2008 1:59:00 AM
Surr: 4-Terphenyl-d14	92.2	%REC			50.9-145	7/15/2008 1:59:00 AM
TIC: Decane	2.57	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Dodecane, 2-methyl-	1.38	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Heptadecane, 9-hexyl-	1.35	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Naphthalene, 1,5-dimethyl-	1.04	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Naphthalene, 1,8-dimethyl-	1.61	mg/Kg		NA	NA	7/15/2008 1:59:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL	**Lab ID:**	0807680-02A
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
TIC: Naphthalene, 1-methyl-	1.38	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Naphthalene, 2,6-dimethyl-	1.10	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Naphthalene, 2-methyl-	10.5	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Octadecane	3.14	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
TIC: Pentadecane, 2,4,6,10,14-tetramethyl-	1.55	mg/Kg		NA	NA	7/15/2008 1:59:00 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
2-Butanone	ND	µg/Kg		159	400	7/17/2008 11:09:00 AM
2-Hexanone	ND	µg/Kg		79.1	400	7/17/2008 11:09:00 AM
4-Methyl-2-pentanone	ND	µg/Kg		104	400	7/17/2008 11:09:00 AM
Acetone	ND	µg/Kg		167	800	7/17/2008 11:09:00 AM
Acrolein	ND	µg/Kg		160	400	7/17/2008 11:09:00 AM
Acrylonitrile	ND	µg/Kg		127	400	7/17/2008 11:09:00 AM
Carbon disulfide	ND	µg/Kg		32.4	200	7/17/2008 11:09:00 AM
Iodomethane	ND	µg/Kg		55.5	400	7/17/2008 11:09:00 AM
Methyl tert-butyl ether	ND	µg/Kg		27.5	200	7/17/2008 11:09:00 AM
Vinyl acetate	ND	µg/Kg		180	400	7/17/2008 11:09:00 AM
Benzene	ND	µg/Kg		10.0	40.0	7/17/2008 11:09:00 AM
Bromobenzene	ND	µg/Kg		24.3	40.0	7/17/2008 11:09:00 AM
Bromochloromethane	ND	µg/Kg		10.2	40.0	7/17/2008 11:09:00 AM
Bromodichloromethane	ND	µg/Kg		11.9	40.0	7/17/2008 11:09:00 AM
Bromoform	ND	µg/Kg		21.0	40.0	7/17/2008 11:09:00 AM
Bromomethane	ND	µg/Kg		15.8	40.0	7/17/2008 11:09:00 AM
n-Butylbenzene	ND	µg/Kg		13.3	40.0	7/17/2008 11:09:00 AM
sec-Butylbenzene	ND	µg/Kg		19.0	40.0	7/17/2008 11:09:00 AM
tert-Butylbenzene	ND	µg/Kg		32.2	40.0	7/17/2008 11:09:00 AM
Carbon tetrachloride	ND	µg/Kg		12.6	40.0	7/17/2008 11:09:00 AM
Chlorobenzene	ND	µg/Kg		13.3	40.0	7/17/2008 11:09:00 AM
Chloroethane	ND	µg/Kg		17.1	40.0	7/17/2008 11:09:00 AM
Chloroform	ND	µg/Kg		5.82	40.0	7/17/2008 11:09:00 AM
Chloromethane	ND	µg/Kg		7.52	40.0	7/17/2008 11:09:00 AM
2-Chlorotoluene	ND	µg/Kg		23.0	40.0	7/17/2008 11:09:00 AM
4-Chlorotoluene	ND	µg/Kg		13.8	40.0	7/17/2008 11:09:00 AM
Dibromochloromethane	ND	µg/Kg		10.7	40.0	7/17/2008 11:09:00 AM
1,2-Dibromo-3-chloropropane	ND	µg/Kg		31.9	40.0	7/17/2008 11:09:00 AM
1,2-Dibromoethane	ND	µg/Kg		15.3	40.0	7/17/2008 11:09:00 AM
Dibromomethane	ND	µg/Kg		13.3	40.0	7/17/2008 11:09:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
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TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-COAL
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-02A
Collection Date: 7/10/2008 11:00:00 AM
Matrix: SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
1,2-Dichlorobenzene	ND	µg/Kg		19.4	40.0	7/17/2008 11:09:00 AM
1,3-Dichlorobenzene	ND	µg/Kg		17.7	40.0	7/17/2008 11:09:00 AM
1,4-Dichlorobenzene	ND	µg/Kg		18.1	40.0	7/17/2008 11:09:00 AM
Dichlorodifluoromethane	ND	µg/Kg		10.5	40.0	7/17/2008 11:09:00 AM
1,1-Dichloroethane	ND	µg/Kg		7.44	40.0	7/17/2008 11:09:00 AM
1,2-Dichloroethane	ND	µg/Kg		7.72	40.0	7/17/2008 11:09:00 AM
1,1-Dichloroethene	ND	µg/Kg		13.1	40.0	7/17/2008 11:09:00 AM
cis-1,2-Dichloroethene	ND	µg/Kg		12.1	40.0	7/17/2008 11:09:00 AM
trans-1,2-Dichloroethene	ND	µg/Kg		11.9	40.0	7/17/2008 11:09:00 AM
1,2-Dichloropropane	ND	µg/Kg		15.3	40.0	7/17/2008 11:09:00 AM
1,3-Dichloropropane	ND	µg/Kg		6.71	40.0	7/17/2008 11:09:00 AM
2,2-Dichloropropane	ND	µg/Kg		10.2	40.0	7/17/2008 11:09:00 AM
1,1-Dichloropropene	ND	µg/Kg		8.45	40.0	7/17/2008 11:09:00 AM
cis-1,3-Dichloropropene	ND	µg/Kg		9.05	40.0	7/17/2008 11:09:00 AM
trans-1,3-Dichloropropene	ND	µg/Kg		7.87	40.0	7/17/2008 11:09:00 AM
Ethylbenzene	24.5	µg/Kg	J	13.4	40.0	7/17/2008 11:09:00 AM
Hexachlorobutadiene	ND	µg/Kg		26.0	40.0	7/17/2008 11:09:00 AM
Isopropylbenzene	100	µg/Kg		22.6	40.0	7/17/2008 11:09:00 AM
4-Isopropyltoluene	ND	µg/Kg		13.3	40.0	7/17/2008 11:09:00 AM
Methylene chloride	ND	µg/Kg		12.3	40.0	7/17/2008 11:09:00 AM
Naphthalene	ND	µg/Kg		27.7	40.0	7/17/2008 11:09:00 AM
n-Propylbenzene	23.7	µg/Kg	J	13.1	40.0	7/17/2008 11:09:00 AM
Styrene	ND	µg/Kg		10.4	40.0	7/17/2008 11:09:00 AM
1,1,1,2-Tetrachloroethane	ND	µg/Kg		16.5	40.0	7/17/2008 11:09:00 AM
1,1,2,2-Tetrachloroethane	ND	µg/Kg		25.2	40.0	7/17/2008 11:09:00 AM
Tetrachloroethene	ND	µg/Kg		16.0	40.0	7/17/2008 11:09:00 AM
Toluene	178	µg/Kg		11.0	40.0	7/17/2008 11:09:00 AM
1,2,3-Trichlorobenzene	ND	µg/Kg		20.9	40.0	7/17/2008 11:09:00 AM
1,2,4-Trichlorobenzene	ND	µg/Kg		14.7	40.0	7/17/2008 11:09:00 AM
1,1,1-Trichloroethane	ND	µg/Kg		8.72	40.0	7/17/2008 11:09:00 AM
1,1,2-Trichloroethane	ND	µg/Kg		14.1	40.0	7/17/2008 11:09:00 AM
Trichloroethene	ND	µg/Kg		9.05	40.0	7/17/2008 11:09:00 AM
Trichlorofluoromethane	ND	µg/Kg		11.9	40.0	7/17/2008 11:09:00 AM
1,2,3-Trichloropropane	ND	µg/Kg		12.7	40.0	7/17/2008 11:09:00 AM
1,2,4-Trimethylbenzene	166	µg/Kg		17.0	40.0	7/17/2008 11:09:00 AM
1,3,5-Trimethylbenzene	94.3	µg/Kg		20.4	40.0	7/17/2008 11:09:00 AM
Vinyl chloride	ND	µg/Kg		10.6	40.0	7/17/2008 11:09:00 AM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
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REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL	**Lab ID:**	0807680-02A
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
o-Xylene	114	µg/Kg		13.5	40.0	7/17/2008 11:09:00 AM
m,p-Xylene	163	µg/Kg		28.3	80.0	7/17/2008 11:09:00 AM
Surr: 1,2-Dichloroethane-d4	95.7	%REC			72-120	7/17/2008 11:09:00 AM
Surr: 4-Bromofluorobenzene	195	%REC	S		74-121	7/17/2008 11:09:00 AM
Surr: Dibromofluoromethane	131	%REC	S		75-120	7/17/2008 11:09:00 AM
Surr: Toluene-d8	192	%REC	S		81-117	7/17/2008 11:09:00 AM
TIC: 1-chloro-2-methyl propane	189	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: 2-methyl butane	99.4	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: 2-methyl pentane	82.4	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: 2-methyl-1-pentene	38.9	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: 3-methyl pentane	28.9	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: Cyclohexane	274	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: ethyl cyclohexane	27.2	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: hexamethyl cyclotrisiloxane	25.9	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: methyl cyclohexane	26.8	µg/Kg		NA	NA	7/17/2008 11:09:00 AM
TIC: pentane	57.0	µg/Kg		NA	NA	7/17/2008 11:09:00 AM

NOTES:
Surrogate recovery was not within method criteria due to matrix interference.
Elevated PQLs are due to matrix interference.

CYANIDE			**SW9010/9012A**			Analyst: **BA**
Cyanide, Total	ND	mg/Kg		0.0200	1.00	7/16/2008 12:15:00 PM
ANIONS BY IC, WATER SOLUBLE			**SW9056**			Analyst: **SB**
Chloride	31.0	mg/Kg		1.00	1.00	7/21/2008 3:33:00 PM
Fluoride	2.54	mg/Kg		1.00	1.00	7/21/2008 3:33:00 PM
Nitrogen, Nitrate	ND	mg/Kg		1.00	1.00	7/21/2008 3:33:00 PM
Nitrogen, Nitrite	ND	mg/Kg		1.00	5.00	7/21/2008 3:33:00 PM
Sulfate	260	mg/Kg		1.00	50.0	7/21/2008 3:33:00 PM
AMMONIA NITROGEN			**SM4500-NH3 BE**			Analyst: **JJ**
Nitrogen, Ammonia	57.1	mg/Kg		1.40	20.0	7/21/2008 4:00:00 PM
SOLIDS, TOTAL			**SM2540 G**			Analyst: **GV**
Total Solids	99.0	wt%		0.010	0.01	7/11/2008 6:50:00 AM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	594	mg/L		1.00	1.0	7/11/2008 4:25:00 PM

Key:	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL	**Lab ID:**	0807680-02A
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	SOLID

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	88.4	mg/kg		1.00	1.0	7/11/2008 4:25:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	683	mg/Kg		1.00	10.0	7/11/2008 4:25:00 PM
PH			**SW9045C**			Analyst: **DSA**
pH	9.20	SU		NA	NA	7/11/2008 4:25:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-COAL-LEACHATE
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-02L
Collection Date: 7/10/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	1.19	mg/L		0.0200	0.100	7/22/2008 7:05:00 PM
Calcium	1.26	mg/L		0.100	0.500	7/18/2008 2:07:00 AM
Iron	13.2	mg/L		0.0200	0.100	7/18/2008 2:07:00 AM
Magnesium	2.21	mg/L		0.400	0.500	7/18/2008 2:07:00 AM
Manganese	0.142	mg/L		0.0010	0.050	7/18/2008 2:07:00 AM
Potassium	0.925	mg/L	J	0.300	1.00	7/22/2008 7:05:00 PM
Silicon	71.0	mg/L		0.0100	0.100	7/30/2008 5:39:00 PM
Sodium	6.67	mg/L		0.100	0.500	7/18/2008 2:07:00 AM
Zinc	0.038	mg/L	J	0.0030	0.050	7/18/2008 2:07:00 AM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0011	mg/L		0.00020	0.0010	7/18/2008 10:04:49 AM
Arsenic	0.0246	mg/L		0.00100	0.0050	7/18/2008 10:04:49 AM
Barium	0.695	mg/L		0.00100	0.0050	7/18/2008 10:04:49 AM
Beryllium	0.0020	mg/L		0.00020	0.0010	7/18/2008 10:04:49 AM
Cadmium	ND	mg/L		0.00020	0.0010	7/18/2008 10:04:49 AM
Chromium	0.0054	mg/L		0.00100	0.0050	7/18/2008 10:04:49 AM
Cobalt	0.0067	mg/L		0.00100	0.0050	7/18/2008 10:04:49 AM
Copper	0.0248	mg/L		0.00100	0.0050	7/18/2008 10:04:49 AM
Lead	0.0217	mg/L		0.00020	0.0010	7/18/2008 10:04:49 AM
Molybdenum	0.0021	mg/L	J	0.00100	0.0050	7/18/2008 10:04:49 AM
Nickel	0.0110	mg/L		0.00200	0.0100	7/18/2008 10:04:49 AM
Selenium	0.0040	mg/L	J	0.00100	0.0050	7/18/2008 10:04:49 AM
Silver	ND	mg/L		0.00020	0.0050	7/18/2008 10:04:49 AM
Strontium	0.135	mg/L		0.00100	0.0050	7/18/2008 10:04:49 AM
Thallium	0.0004	mg/L	J	0.00020	0.0010	7/18/2008 10:04:49 AM
Zinc	0.0306	mg/L		0.00300	0.0100	7/18/2008 10:04:49 AM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/14/2008 3:10:00 PM
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8032A**			Analyst: **JC**
Acrylamide	ND	mg/L		0.0015	0.010	7/22/2008 3:22:04 PM
SEMI-VOLATILE RANGE ORGANICS			**SW8015B**			Analyst: **TM**
TPH (Diesel Range)	ND	mg/L		0.046	0.11	7/15/2008 5:12:48 PM
TPH (Oil Range)	ND	mg/L		0.024	0.28	7/15/2008 5:12:48 PM
Surr: o-Terphenyl	97.7	%REC			30-130	7/15/2008 5:12:48 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL-LEACHATE	**Lab ID:**	0807680-02L
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMI-VOLATILE RANGE ORGANICS				**SW8015B**		Analyst: **TM**
NOTES: Insufficient sample was available to prepare and analyze a matrix spiked quality control sample. Accuracy assessment was based on a lab contro sample.						
GLYCOLS, TOTAL				**GC-FID**		Analyst: **TM**
Diethylene Glycol	ND	mg/L		50.0	50.0	7/23/2008
Monoethylene Glycol	ND	mg/L		50.0	50.0	7/23/2008
Triethylene Glycol	ND	mg/L		50.0	50.0	7/23/2008
SEMIVOLATILE ORGANIC COMPOUNDS				**SW8270C**		Analyst: **CLS**
Acenaphthene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Acenaphthylene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Anthracene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Benzidine	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Benzo(a)anthracene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Benzo(a)pyrene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Benzo(b)fluoranthene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Benzo(g,h,i)perylene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Benzo(k)fluoranthene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Bis(2-chloroethoxy)methane	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Bis(2-chloroethyl)ether	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Bis(2-chloroisopropyl)ether	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Bis(2-ethylhexyl)phthalate	0.0108	mg/L	J	0.00699	0.0117	7/16/2008 10:01:00 PM
4-Bromophenyl phenyl ether	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Butyl benzyl phthalate	ND	mg/L		0.00583	0.0117	7/16/2008 10:01:00 PM
4-Chloro-3-methylphenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2-Chloronaphthalene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2-Chlorophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
4-Chlorophenyl phenyl ether	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Chrysene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
o-Cresol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
m,p-Cresol	ND	mg/L		0.00583	0.0233	7/16/2008 10:01:00 PM
Dibenzo(a,h)anthracene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Di-n-butyl phthalate	ND	mg/L		0.00350	0.0117	7/16/2008 10:01:00 PM
1,2-Dichlorobenzene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
1,3-Dichlorobenzene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
1,4-Dichlorobenzene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
3,3´-Dichlorobenzidine	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL-LEACHATE	**Lab ID:**	0807680-02L
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
2,4-Dichlorophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Diethyl phthalate	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Dimethyl phthalate	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2,4-Dimethylphenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
4,6-Dinitro-2-methylphenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2,4-Dinitrophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2,4-Dinitrotoluene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2,6-Dinitrotoluene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Di-n-octyl phthalate	ND	mg/L		0.00583	0.0117	7/16/2008 10:01:00 PM
1,2-Diphenylhydrazine	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Fluoranthene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Fluorene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Hexachlorobenzene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Hexachlorobutadiene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Hexachlorocyclopentadiene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Hexachloroethane	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Indeno(1,2,3-cd)pyrene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Isophorone	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Naphthalene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Nitrobenzene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2-Nitrophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
4-Nitrophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
N-Nitrosodimethylamine	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
N-Nitrosodiphenylamine	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
N-Nitrosodi-n-propylamine	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Pentachlorophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Phenanthrene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Phenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Pyrene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
1,2,4-Trichlorobenzene	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2,4,5-Trichlorophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
2,4,6-Trichlorophenol	ND	mg/L		0.00233	0.0117	7/16/2008 10:01:00 PM
Surr: 2-Fluorophenol	46.3	%REC			21-110	7/16/2008 10:01:00 PM
Surr: Phenol-d5	32.3	%REC			10-110	7/16/2008 10:01:00 PM
Surr: 2,4,6-Tribromophenol	94.7	%REC			10-123	7/16/2008 10:01:00 PM
Surr: Nitrobenzene-d5	83.0	%REC			35-114	7/16/2008 10:01:00 PM
Surr: 2-Fluorobiphenyl	73.5	%REC			43-116	7/16/2008 10:01:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL-LEACHATE	**Lab ID:**	0807680-02L
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS			**SW8270C**			Analyst: **CLS**
Surr: 4-Terphenyl-d14	76.6	%REC			33-141	7/16/2008 10:01:00 PM
TIC: Additional analytes	ND	mg/L		NA	NA	7/16/2008 10:01:00 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Acetone	ND	µg/L		4.88	20.0	7/15/2008 1:03:00 PM
Acrolein	ND	µg/L		4.36	10.0	7/15/2008 1:03:00 PM
Acrylonitrile	ND	µg/L		4.24	10.0	7/15/2008 1:03:00 PM
Benzene	ND	µg/L		0.13	1.0	7/15/2008 1:03:00 PM
Bromobenzene	ND	µg/L		0.25	1.0	7/15/2008 1:03:00 PM
Bromochloromethane	ND	µg/L		0.35	1.0	7/15/2008 1:03:00 PM
Bromodichloromethane	ND	µg/L		0.16	1.0	7/15/2008 1:03:00 PM
Bromoform	ND	µg/L		0.40	1.0	7/15/2008 1:03:00 PM
Bromomethane	ND	µg/L		0.50	1.0	7/15/2008 1:03:00 PM
2-Butanone	ND	µg/L		4.68	10.0	7/15/2008 1:03:00 PM
n-Butylbenzene	ND	µg/L		0.25	1.0	7/15/2008 1:03:00 PM
sec-Butylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:03:00 PM
tert-Butylbenzene	ND	µg/L		0.24	1.0	7/15/2008 1:03:00 PM
Carbon disulfide	ND	µg/L		1.27	10.0	7/15/2008 1:03:00 PM
Carbon tetrachloride	ND	µg/L		0.25	1.0	7/15/2008 1:03:00 PM
Chlorobenzene	ND	µg/L		0.18	1.0	7/15/2008 1:03:00 PM
Chloroethane	ND	µg/L		0.94	1.0	7/15/2008 1:03:00 PM
Chloroform	ND	µg/L		0.25	1.0	7/15/2008 1:03:00 PM
Chloromethane	ND	µg/L		0.33	1.0	7/15/2008 1:03:00 PM
2-Chlorotoluene	ND	µg/L		0.25	1.0	7/15/2008 1:03:00 PM
4-Chlorotoluene	ND	µg/L		0.28	1.0	7/15/2008 1:03:00 PM
Dibromochloromethane	ND	µg/L		0.42	1.0	7/15/2008 1:03:00 PM
1,2-Dibromo-3-chloropropane	ND	µg/L		0.50	1.0	7/15/2008 1:03:00 PM
1,2-Dibromoethane	ND	µg/L		0.34	1.0	7/15/2008 1:03:00 PM
Dibromomethane	ND	µg/L		0.29	1.0	7/15/2008 1:03:00 PM
1,2-Dichlorobenzene	ND	µg/L		0.45	1.0	7/15/2008 1:03:00 PM
1,3-Dichlorobenzene	ND	µg/L		0.14	1.0	7/15/2008 1:03:00 PM
1,4-Dichlorobenzene	ND	µg/L		0.29	1.0	7/15/2008 1:03:00 PM
Dichlorodifluoromethane	ND	µg/L		0.71	1.0	7/15/2008 1:03:00 PM
1,1-Dichloroethane	ND	µg/L		0.38	1.0	7/15/2008 1:03:00 PM
1,2-Dichloroethane	ND	µg/L		0.43	1.0	7/15/2008 1:03:00 PM
1,1-Dichloroethene	ND	µg/L		0.33	1.0	7/15/2008 1:03:00 PM
cis-1,2-Dichloroethene	ND	µg/L		0.23	1.0	7/15/2008 1:03:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-COAL-LEACHATE
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-02L
Collection Date: 7/10/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
trans-1,2-Dichloroethene	ND	µg/L		0.39	1.0	7/15/2008 1:03:00 PM
1,2-Dichloropropane	ND	µg/L		0.46	1.0	7/15/2008 1:03:00 PM
1,3-Dichloropropane	ND	µg/L		0.71	1.0	7/15/2008 1:03:00 PM
2,2-Dichloropropane	ND	µg/L		0.23	1.0	7/15/2008 1:03:00 PM
1,1-Dichloropropene	ND	µg/L		0.33	1.0	7/15/2008 1:03:00 PM
cis-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 1:03:00 PM
trans-1,3-Dichloropropene	ND	µg/L		0.22	1.0	7/15/2008 1:03:00 PM
Ethylbenzene	ND	µg/L		0.18	1.0	7/15/2008 1:03:00 PM
Hexachlorobutadiene	ND	µg/L		0.26	1.0	7/15/2008 1:03:00 PM
2-Hexanone	ND	µg/L		4.11	10.0	7/15/2008 1:03:00 PM
Iodomethane	ND	µg/L		3.44	10.0	7/15/2008 1:03:00 PM
Isopropylbenzene	ND	µg/L		0.23	1.0	7/15/2008 1:03:00 PM
4-Isopropyltoluene	ND	µg/L		0.24	1.0	7/15/2008 1:03:00 PM
Methylene chloride	ND	µg/L		0.54	1.0	7/15/2008 1:03:00 PM
4-Methyl-2-pentanone	ND	µg/L		4.40	10.0	7/15/2008 1:03:00 PM
Methyl tert-butyl ether	ND	µg/L		0.76	10.0	7/15/2008 1:03:00 PM
Naphthalene	ND	µg/L		0.42	1.0	7/15/2008 1:03:00 PM
n-Propylbenzene	ND	µg/L		0.14	1.0	7/15/2008 1:03:00 PM
Styrene	ND	µg/L		0.24	1.0	7/15/2008 1:03:00 PM
1,1,1,2-Tetrachloroethane	ND	µg/L		0.36	1.0	7/15/2008 1:03:00 PM
1,1,2,2-Tetrachloroethane	ND	µg/L		0.38	1.0	7/15/2008 1:03:00 PM
Tetrachloroethene	ND	µg/L		0.20	1.0	7/15/2008 1:03:00 PM
Toluene	0.2	µg/L	J	0.17	1.0	7/15/2008 1:03:00 PM
1,2,3-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 1:03:00 PM
1,2,4-Trichlorobenzene	ND	µg/L		0.41	1.0	7/15/2008 1:03:00 PM
1,1,1-Trichloroethane	ND	µg/L		0.35	1.0	7/15/2008 1:03:00 PM
1,1,2-Trichloroethane	ND	µg/L		0.49	1.0	7/15/2008 1:03:00 PM
Trichloroethene	ND	µg/L		0.30	1.0	7/15/2008 1:03:00 PM
Trichlorofluoromethane	ND	µg/L		0.30	1.0	7/15/2008 1:03:00 PM
1,2,3-Trichloropropane	ND	µg/L		0.36	1.0	7/15/2008 1:03:00 PM
1,2,4-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:03:00 PM
1,3,5-Trimethylbenzene	ND	µg/L		0.28	1.0	7/15/2008 1:03:00 PM
Vinyl acetate	ND	µg/L		4.87	10.0	7/15/2008 1:03:00 PM
Vinyl chloride	ND	µg/L		0.22	1.0	7/15/2008 1:03:00 PM
o-Xylene	ND	µg/L		0.19	1.0	7/15/2008 1:03:00 PM
m,p-Xylene	ND	µg/L		0.29	2.0	7/15/2008 1:03:00 PM
Surr: 1,2-Dichloroethane-d4	85.6	%REC			80-120	7/15/2008 1:03:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL-LEACHATE	**Lab ID:**	0807680-02L
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **AS**
Surr: 4-Bromofluorobenzene	93.9	%REC			86-115	7/15/2008 1:03:00 PM
Surr: Dibromofluoromethane	94.6	%REC			80-120	7/15/2008 1:03:00 PM
Surr: Toluene-d8	97.6	%REC			88-110	7/15/2008 1:03:00 PM
TIC: Additional analytes	ND	µg/L		NA	NA	7/15/2008 1:03:00 PM
CYANIDE			**E335.4**			Analyst: **BA**
Cyanide, Total	ND	mg/L		0.0040	0.020	7/16/2008 12:15:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Nitrogen, Nitrate	ND	mg/L		0.050	0.10	7/11/2008 8:24:00 PM
Nitrogen, Nitrite	0.10	mg/L	J	0.050	0.50	7/11/2008 8:24:00 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **SB**
Chloride	1.43	mg/L		0.100	1.00	7/21/2008 3:33:00 PM
Fluoride	0.31	mg/L		0.050	0.20	7/21/2008 3:33:00 PM
Sulfate	4.55	mg/L	J	0.700	5.00	7/21/2008 3:33:00 PM
AMMONIA NITROGEN			**E350.1**			Analyst: **BA**
Nitrogen, Ammonia (As N)	0.10	mg/L		0.030	0.10	7/16/2008 9:45:00 AM
OIL AND GREASE			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/21/2008 8:00:00 AM
OIL AND GREASE_SGT			**E1664**			Analyst: **JJ**
Oil & Grease	ND	mg/L		2.00	5.0	7/21/2008 8:00:00 AM
CONDUCTIVITY			**SM2510 B**			Analyst: **GV**
Specific Conductivity	86.7	µmhos/cm		NA	NA	7/14/2008 6:25:00 AM
TOTAL DISSOLVED SOLIDS			**SM2540 C**			Analyst: **GV**
Total Dissolved Solids	15	mg/L		1.0	1	7/14/2008 7:15:00 AM
TOTAL SUSPENDED SOLIDS			**SM2540 D**			Analyst: **GV**
Total Suspended Solids	1	mg/L		1.0	1	7/14/2008 8:15:00 AM
ACIDITY			**SM2310 B**			Analyst: **DSA**
Acidity, Total	ND	mg/L		1.00	1.0	7/14/2008 4:10:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Bicarbonate (As CaCO3)	23.2	mg/L		1.00	1.0	7/14/2008 4:10:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
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NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT:	WV DEP - CHARLESTON	**WorkOrder:**	0807680
Client Sample ID:	MF-COAL-LEACHATE	**Lab ID:**	0807680-02L
Project:	MF-SLURRY	**Collection Date:**	7/10/2008 11:00:00 AM
Site ID:		**Matrix:**	LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Carbonate (As CaCO3)	6.0	mg/L		1.00	1.0	7/14/2008 4:10:00 PM
ALKALINITY			**SM2320 B**			Analyst: **DSA**
Alkalinity, Total (As CaCO3)	30.6	mg/L		1.00	1.0	7/14/2008 4:10:00 PM
PH - LAB TEST, HOLD TIME EXPIRED			**SM4500-H+-B**			Analyst: **DSA**
pH	9.44	SU		NA	NA	7/14/2008 4:10:00 PM

Key:				
	MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
	MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
	NA	Not Applicable	E	Estimated Value above quantitation range
	ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
	PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
	TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

REI Consultants, Inc. Analytical Results

Date: *06-Aug-08*

CLIENT: WV DEP - CHARLESTON
Client Sample ID: MF-COAL-LEACHATE LAB FILTERED
Project: MF-SLURRY
Site ID:

WorkOrder: 0807680
Lab ID: 0807680-02LB
Collection Date: 7/10/2008 11:00:00 AM
Matrix: LEACHATE

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP			**E200.7**			Analyst: **BP**
Aluminum	0.146	mg/L		0.0200	0.100	7/30/2008 12:20:00 AM
Calcium	0.284	mg/L	J	0.100	0.500	7/30/2008 12:20:00 AM
Iron	0.050	mg/L	J	0.0200	0.100	7/30/2008 12:20:00 AM
Magnesium	ND	mg/L		0.400	0.500	7/30/2008 12:20:00 AM
Manganese	0.001	mg/L	J	0.0010	0.050	7/30/2008 12:20:00 AM
Potassium	0.321	mg/L	J	0.300	1.00	7/30/2008 12:20:00 AM
Silicon	13.2	mg/L		0.0100	0.100	7/30/2008 5:33:00 PM
Sodium	48.1	mg/L		0.100	0.500	7/30/2008 12:20:00 AM
Zinc	ND	mg/L		0.0030	0.050	7/30/2008 12:20:00 AM
METALS BY ICP-MS			**E200.8**			Analyst: **DBB**
Antimony	0.0015	mg/L		0.00020	0.0010	7/18/2008 10:10:40 AM
Arsenic	0.0198	mg/L		0.00100	0.0050	7/18/2008 10:10:40 AM
Barium	0.0227	mg/L		0.00100	0.0050	7/18/2008 10:10:40 AM
Beryllium	ND	mg/L		0.00020	0.0010	7/18/2008 10:10:40 AM
Cadmium	ND	mg/L		0.00020	0.0010	7/18/2008 10:10:40 AM
Chromium	ND	mg/L		0.00100	0.0050	7/18/2008 10:10:40 AM
Cobalt	ND	mg/L		0.00100	0.0050	7/18/2008 10:10:40 AM
Copper	ND	mg/L		0.00100	0.0050	7/18/2008 10:10:40 AM
Lead	0.0003	mg/L	J	0.00020	0.0010	7/18/2008 10:10:40 AM
Molybdenum	0.0029	mg/L	J	0.00100	0.0050	7/18/2008 10:10:40 AM
Nickel	ND	mg/L		0.00200	0.0100	7/18/2008 10:10:40 AM
Selenium	0.0043	mg/L	J	0.00100	0.0050	7/18/2008 10:10:40 AM
Silver	ND	mg/L		0.00020	0.0050	7/18/2008 10:10:40 AM
Strontium	0.115	mg/L		0.00100	0.0050	7/18/2008 10:10:40 AM
Thallium	0.0002	mg/L	J	0.00020	0.0010	7/18/2008 10:10:40 AM
Vanadium	0.0031	mg/L	J	0.00100	0.0100	7/18/2008 10:10:40 AM
MERCURY, TOTAL			**E245.1**			Analyst: **DL**
Mercury	ND	mg/L		0.00010	0.0010	7/14/2008 3:11:00 PM

Key:

MCL	Maximum Contaminant Level	J	Analyte detected below quantitation limits
MDL	Minimum Detection Limit	B	Analyte detected in the associated Method Blank
NA	Not Applicable	E	Estimated Value above quantitation range
ND	Not Detected at the PQL or MDL	H	Holding times for preparation or analysis exceeded
PQL	Practical Quantitation Limit	S	Spike/Surrogate Recovery outside accepted recovery limits
TIC	Tentatively Identified Compound, Estimated Concentration	*	Value exceeds Maximum Contaminant Level

Appendix II-Q

NATIONAL PRIMARY DRINKING WATER STANDARDS

EPA National Primary Drinking Water Standards

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Acrylamide	TT[8]	Nervous system or blood problems;	Added to water during sewage/wastewater increased risk of cancer treatment	zero
OC	Alachlor	0.002	Eye, liver, kidney or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops	zero
R	Alpha particles	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	zero
IOC	Antimony	0.006	Increase in blood cholesterol; decrease in blood sugar	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	0.006
IOC	Arsenic	0.010 as of 1/23/06	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards, runoff from glass & electronics production wastes	0
IOC	Asbestos (fibers >10 micrometers)	7 million fibers per Liter (MFL)	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits	7 MFL
OC	Atrazine	0.003	Cardiovascular system or reproductive problems	Runoff from herbicide used on row crops	0.003
IOC	Barium	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	2
OC	Benzene	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills	zero
OC	Benzo(a)pyrene (PAHs)	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines	zero
IOC	Beryllium	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	0.004
R	Beta particles and photon emitters	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation	zero
DBP	Bromate	0.010	Increased risk of cancer	Byproduct of drinking water disinfection	zero
IOC	Cadmium	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	0.005
OC	Carbofuran	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa	0.04
OC	Carbon tetrachloride	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities	zero
D	Chloramines (as Cl_2)	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort, anemia	Water additive used to control microbes	MRDLG=4[1]

LEGEND

D Dinsinfectant

DBP Disinfection Byproduct

IOC Inorganic Chemical

M Microorganism

OC Organic Chemical

R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Chlordane	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide	zero
D	Chlorine (as Cl_2)	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort	Water additive used to control microbes	MRDLG=4[1]
D	Chlorine dioxide (as ClO_2)	MRDL=0.8[1]	Anemia; infants & young children: nervous system effects	Water additive used to control microbes	MRDLG=0.8[1]
DBP	Chlorite	1.0	Anemia; infants & young children: nervous system effects	Byproduct of drinking water disinfection	0.8
OC	Chlorobenzene	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories	0.1
IOC	Chromium (total)	0.1	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits	0.1
IOC	Copper	TT[7]; Action Level = 1.3	Short term exposure: Gastrointestinal distress. Long term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits	1.3
M	*Cryptosporidium*	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
IOC	Cyanide (as free cyanide)	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	0.2
OC	2,4-D	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops	0.07
OC	Dalapon	0.2	Minor kidney changes	Runoff from herbicide used on rights of way	0.2
OC	1,2-Dibromo-3-chloropropane (DBCP)	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	zero
OC	o-Dichlorobenzene	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories	0.6
OC	p-Dichlorobenzene	0.075	Anemia; liver, kidney or spleen damage; changes in blood	Discharge from industrial chemical factories	0.075
OC	1,2-Dichloroethane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero
OC	1,1-Dichloroethylene	0.007	Liver problems	Discharge from industrial chemical factories	0.007
OC	cis-1,2-Dichloroethylene	0.07	Liver problems	Discharge from industrial chemical factories	0.07
OC	trans-1,2-Dichloroethylene	0.1	Liver problems	Discharge from industrial chemical factories	0.1
OC	Dichloromethane	0.005	Liver problems; increased risk of cancer	Discharge from drug and chemical factories	zero
OC	1,2-Dichloropropane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero
OC	Di(2-ethylhexyl) adipate	0.4	Weight loss, live problems, or possible reproductive difficulties	Discharge from chemical factories	0.4
OC	Di(2-ethylhexyl) phthalate	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories	zero
OC	Dinoseb	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables	0.007
OC	Dioxin (2,3,7,8-TCDD)	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories	zero
OC	Diquat	0.02	Cataracts	Runoff from herbicide use	0.02
OC	Endothall	0.1	Stomach and intestinal problems	Runoff from herbicide use	0.1

LEGEND

D Dinsinfectant

DBP Disinfection Byproduct

IOC Inorganic Chemical

M Microorganism

OC Organic Chemical

R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Endrin	0.002	Liver problems	Residue of banned insecticide	0.002
OC	Epichlorohydrin	TT[8]	Increased cancer risk, and over a long period of time, stomach problems	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	zero
OC	Ethylbenzene	0.7	Liver or kidneys problems	Discharge from petroleum refineries	0.7
OC	Ethylene dibromide	0.00005	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	Discharge from petroleum refineries	zero
IOC	Fluoride	4.0	Bone disease (pain and tenderness of the bones); Children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	4.0
M	*Giardia lamblia*	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
OC	Glyphosate	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use	0.7
DBP	Haloacetic acids (HAA5)	0.060	Increased risk of cancer	Byproduct of drinking water disinfection	n/a[6]
OC	Heptachlor	0.0004	Liver damage; increased risk of cancer	Residue of banned termiticide	zero
OC	Heptachlor epoxide	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor	zero
M	Heterotrophic plate count (HPC)	TT[3]	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment	n/a
OC	Hexachlorobenzene	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories	zero
OC	Hexachlorocyclopentadiene	0.05	Kidney or stomach problems	Discharge from chemical factories	0.05
IOC	Lead	TT[7]; Action Level = 0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits	zero
M	*Legionella*	TT[3]	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems	zero
OC	Lindane	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, gardens	0.0002
IOC	Mercury (inorganic)	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	0.002
OC	Methoxychlor	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	0.04
IOC	Nitrate (measured as Nitrogen)	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	10
IOC	Nitrite (measured as Nitrogen)	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	1

LEGEND

D Dinsinfectant
DBP Disinfection Byproduct
IOC Inorganic Chemical
M Microorganism
OC Organic Chemical
R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Oxamyl (Vydate)	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	0.2
OC	Pentachlorophenol	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood preserving factories	zero
OC	Picloram	0.5	Liver problems	Herbicide runoff	0.5
OC	Polychlorinated biphenyls (PCBs)	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals	zero
R	Radium 226 and Radium 228 (combined)	5 pCi/L	Increased risk of cancer	Erosion of natural deposits	zero
IOC	Selenium	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines	0.05
OC	Simazine	0.004	Problems with blood	Herbicide runoff	0.004
OC	Styrene	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills	0.1
OC	Tetrachloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners	zero
IOC	Thallium	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	0.0005
OC	Toluene	1	Nervous system, kidney, or liver problems	Discharge from petroleum factories	1
M	Total Coliforms (including fecal coliform and *E. coli*)	5.0%[4]	Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present[5]	Coliforms are naturally present in the environment as well as feces; fecal coliforms and *E. coli* only come from human and animal fecal waste.	zero
DBP	Total Trihalomethanes (TTHMs)	0.10 0.080 after 12/31/03	Liver, kidney or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection	n/a[6]
OC	Toxaphene	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle	zero
OC	2,4,5-TP (Silvex)	0.05	Liver problems	Residue of banned herbicide	0.05
OC	1,2,4-Trichlorobenzene	0.07	Changes in adrenal glands	Discharge from textile finishing factories	0.07
OC	1,1,1-Trichloroethane	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories	0.20
OC	1,1,2-Trichloroethane	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories	0.003
OC	Trichloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from metal degreasing sites and other factories	zero
M	Turbidity	TT[3]	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing micro-organisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff	n/a
R	Uranium	30 ug/L as of 12/08/03	Increased risk of cancer, kidney toxicity	Erosion of natural deposits	zero

LEGEND

D Dinsinfectant

DBP Disinfection Byproduct

IOC Inorganic Chemical

M Microorganism

OC Organic Chemical

R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Vinyl chloride	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories	zero
M	Viruses (enteric)	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
OC	Xylenes (total)	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories	10

NOTES

1 Definitions

- Maximum Contaminant Level Goal (MCLG)—The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
- Maximum Contaminant Level (MCL)—The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.
- Maximum Residual Disinfectant Level Goal (MRDLG)—The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL)—The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Treatment Technique (TT)—A required process intended to reduce the level of a contaminant in drinking water.

2 Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million (ppm).

3 EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- *Cryptosporidium* (as of 1/1/02 for systems serving >10,000 and 1/14/05 for systems serving <10,000) 99% removal.
- *Giardia lamblia*: 99.9% removal/inactivation
- Viruses: 99.99% removal/inactivation
- *Legionella:* No limit, but EPA believes that if *Giardia* and viruses are removed/inactivated, *Legionella* will also be controlled.
- Turbidity: At no time can turbidity (cloudiness of water) go above 5 nephelolometric turbidity units (NTU); systems that filter must ensure that the turbidity go no higher than 1 NTU (0.5 NTU for conventional or direct filtration) in at least 95% of the daily samples in any month. As of January 1, 2002, for systems servicing >10,000, and January 14, 2005, for systems servicing <10,000, turbidity may never exceed 1 NTU, and must not exceed 0.3 NTU in 95% of daily samples in any month.
- HPC: No more than 500 bacterial colonies per milliliter
- Long Term 1 Enhanced Surface Water Treatment (Effective Date: January 14, 2005); Surface water systems or (GWUDI) systems serving fewer than 10,000 people must comply with the applicable Long Term 1 Enhanced Surface Water Treatment Rule provisions (e.g. turbidity standards, individual filter monitoring, *Cryptosporidium* removal requirements, updated watershed control requirements for unfiltered systems).
- Filter Backwash Recycling: The Filter Backwash Recycling Rule requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.

4 No more than 5.0% samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or *E. coli* if two consecutive TC-positive samples, and one is also positive for *E. coli* fecal coliforms, system has an acute MCL violation.

5 Fecal coliform and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Disease-causing microbes (pathogens) in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. These pathogens may pose a special health risk for infants, young children, and people with severely compromised immune systems.

6 Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

- Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)
- Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)

7 Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

8 Each water system must certify, in writing, to the state (using third-party or manufacturers certification) that when it uses acrylamide and/or epichlorohydrin to treat water, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows: Acrylamide = 0.05% dosed at 1 mg/L (or equivalent); Epichlorohydrin = 0.01% dosed at 20 mg/L (or equivalent).

LEGEND

D	Dinsinfectant	IOC	Inorganic Chemical	OC	Organic Chemical
DBP	Disinfection Byproduct	M	Microorganism	R	Radionuclides