WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☐ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☒ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☒ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
Allegheny Energy Supply Company LLC

2. Federal Employer ID No. ***(FEIN):***
2 3 3 0 2 0 4 8 1

3. Name of facility *(if different from above):*
Pleasants Power Station

4. The applicant is the:
☒ **OWNER** ☐ **OPERATOR** ☐ **BOTH**

5A. Applicant's mailing address:
800 Cabin Hill Drive

Greensburg, PA 15601

5B. Facility's present physical address:
State Route 2 (No. 1 Power Station Blvd.)

Willow Island, WV 26134

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**

- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

- If **YES,** please explain: Applicant is owner/operator of facility.

- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): A Refined Coal System is to be installed for the application of sorbent chemicals to coal for pollution control.

10. North American Industry Classification System **(NAICS)** code for the facility:
221112

11A. DAQ Plant ID No. (for existing facilities only):
0 7 3 – 0 0 0 0 5

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
Title V R30-R30-07300005-2013

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

Follow I-77 North from Charleston, WV. Take Exit #179 to State Route 2 North. The facility is located on the left of Route 2 between Willow Island, WV and Belmont, WV.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
N/A	Willow Island, WV	Pleasants
12.E. UTM Northing (KM): 4357.00	12F. UTM Easting (KM): 489.0	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
A Refined Coal System is to be installed for the application of sorbent chemicals to coal for pollution control. Sorbents will be delivered by truck to storage silos and a storage tank, then mixed and applied to the coal at conveyors. See Attachment G for detailed process description.

14A. Provide the date of anticipated installation or change: 7/6/2015 – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: 11/16/2015

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 8 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) **.**
– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**

– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☒ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	
☐ General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☒ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☐ Other Collectors, specify

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33**. Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☒ **YES** ☐ **NO Attachment G contains a confidential process description of the Chem-Mod Refined Coal Process.**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "***Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ DATE: _____

(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: Mark J. Valach		35C. Title: Director, Pleasants Plant
35D. E-mail: valachm@firstenergycorp.com	36E. Phone: 304-665-3120	36F. FAX:
36A. Printed name of contact person (if different from above): Eric R. Foster		36B. Title: Engineer IV
36C. E-mail: efoster@firstenergycorp.com	36D. Phone: 330-436-1530	36E. FAX: 330-777-6514

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☐ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☐ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☒ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☒ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☐ **Attachment N: Supporting Emissions Calculations**
- ☐ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☒ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***

☐ ***For Title V Administrative Amendments:***

- ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***

☐ ***For Title V Minor Modifications:***

- ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
- ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***

☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***

- ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
- ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
- ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment A

Business Certificate

WEST VIRGINIA
STATE TAX DEPARTMENT

BUSINESS REGISTRATION
CERTIFICATE

ISSUED TO:

ALLEGHENY ENERGY SUPPLY COMPANY LLC
800 CABIN HILL DR
GREENSBURG, PA 15601-1650

BUSINESS REGISTRATION ACCOUNT NUMBER: **1015-5330**

This certificate is issued on: 06/22/2011

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

atL006 v.4
L1792982144

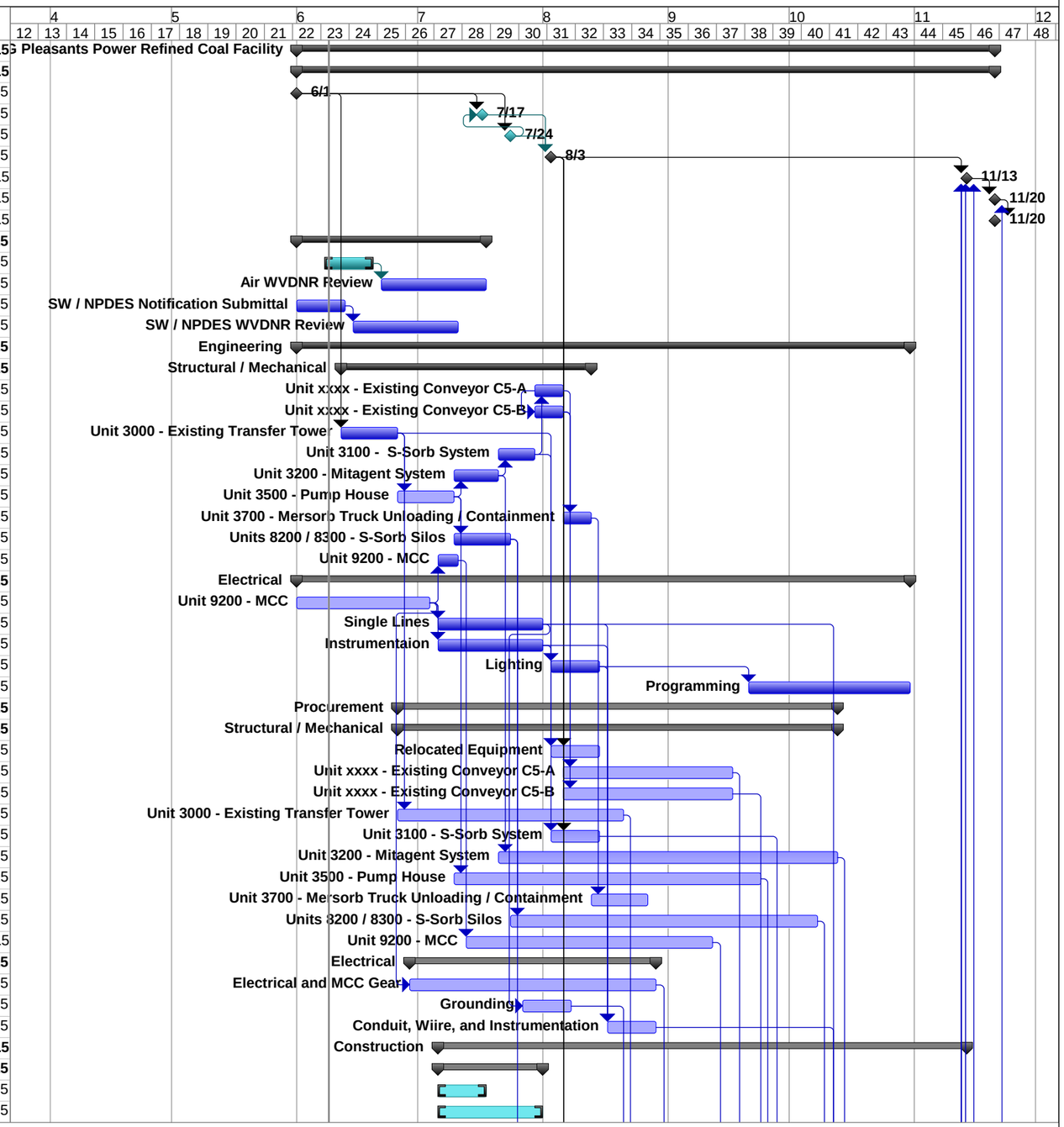
Attachment C
Installation and Start Up Schedule

Date: Tue 6/9/15

AJG Pleasants Power Section 45 Preliminary Schedule

5 Days / Week Schedule

ID	Task Name	% Complete	Duration	Start	Finish
1	**4932 AJG Pleasants Power Refined Coal Facility**	**0%**	**125 days**	**Mon 6/1/15**	**Fri 11/20/15**
2	**Milestones**	**0%**	**125 days**	**Mon 6/1/15**	**Fri 11/20/15**
3	LNTP	100%	0 days	Mon 6/1/15	Mon 6/1/15
4	EPC Contract Executed	0%	0 days	Fri 7/17/15	Fri 7/17/15
5	Permits Complete	0%	0 days	Fri 7/24/15	Fri 7/24/15
6	Mobilization for Construction	0%	0 days	Mon 8/3/15	Mon 8/3/15
7	Mechanical Completion	0%	0 days	Fri 11/13/15	Fri 11/13/15
8	End of Commissioning	0%	0 days	Fri 11/20/15	Fri 11/20/15
9	Project Complete / Demobilization	0%	0 days	Fri 11/20/15	Fri 11/20/15
10	**Permitting**	**0%**	**35 days**	**Mon 6/1/15**	**Fri 7/17/15**
11	Air Notification Submittal	0%	10 days	Mon 6/8/15	Fri 6/19/15
12	Air WVDNR Review	0%	20 days	Mon 6/22/15	Fri 7/17/15
13	SW / NPDES Notification Submittal	0%	10 days	Mon 6/1/15	Fri 6/12/15
14	SW / NPDES WVDNR Review	0%	20 days	Mon 6/15/15	Fri 7/10/15
15	**Engineering**	**0%**	**110 days**	**Mon 6/1/15**	**Fri 10/30/15**
16	**Structural / Mechanical**	**0%**	**44 days**	**Fri 6/12/15**	**Wed 8/12/15**
17	Unit xxxx - Existing Conveyor C5-A	0%	5 days	Thu 7/30/15	Wed 8/5/15
18	Unit xxxx - Existing Conveyor C5-B	0%	5 days	Thu 7/30/15	Wed 8/5/15
19	Unit 3000 - Existing Transfer Tower	0%	10 days	Fri 6/12/15	Thu 6/25/15
20	Unit 3100 - S-Sorb System	0%	7 days	Tue 7/21/15	Wed 7/29/15
21	Unit 3200 - Mitagent System	0%	7 days	Fri 7/10/15	Mon 7/20/15
22	Unit 3500 - Pump House	0%	10 days	Fri 6/26/15	Thu 7/9/15
23	Unit 3700 - Mersorb Truck Unloading / Containment	0%	5 days	Thu 8/6/15	Wed 8/12/15
24	Units 8200 / 8300 - S-Sorb Silos	0%	10 days	Fri 7/10/15	Thu 7/23/15
25	Unit 9200 - MCC	0%	5 days	Mon 7/6/15	Fri 7/10/15
26	**Electrical**	**0%**	**110 days**	**Mon 6/1/15**	**Fri 10/30/15**
27	Unit 9200 - MCC	0%	25 days	Mon 6/1/15	Fri 7/3/15
28	Single Lines	0%	20 days	Mon 7/6/15	Fri 7/31/15
29	Instrumentaion	0%	20 days	Mon 7/6/15	Fri 7/31/15
30	Lighting	0%	10 days	Mon 8/3/15	Fri 8/14/15
31	Programming	0%	30 days	Mon 9/21/15	Fri 10/30/15
32	**Procurement**	**0%**	**77 days**	**Fri 6/26/15**	**Mon 10/12/15**
33	**Structural / Mechanical**	**0%**	**77 days**	**Fri 6/26/15**	**Mon 10/12/15**
34	Relocated Equipment	0%	10 days	Mon 8/3/15	Fri 8/14/15
35	Unit xxxx - Existing Conveyor C5-A	0%	30 days	Thu 8/6/15	Wed 9/16/15
36	Unit xxxx - Existing Conveyor C5-B	0%	30 days	Thu 8/6/15	Wed 9/16/15
37	Unit 3000 - Existing Transfer Tower	0%	40 days	Fri 6/26/15	Thu 8/20/15
38	Unit 3100 - S-Sorb System	0%	10 days	Mon 8/3/15	Fri 8/14/15
39	Unit 3200 - Mitagent System	0%	60 days	Tue 7/21/15	Mon 10/12/15
40	Unit 3500 - Pump House	0%	54 days	Fri 7/10/15	Wed 9/23/15
41	Unit 3700 - Mersorb Truck Unloading / Containment	0%	10 days	Thu 8/13/15	Wed 8/26/15
42	Units 8200 / 8300 - S-Sorb Silos	0%	54 days	Fri 7/24/15	Wed 10/7/15
43	Unit 9200 - MCC	0%	45 days	Mon 7/13/15	Fri 9/11/15
44	**Electrical**	**0%**	**45 days**	**Mon 6/29/15**	**Fri 8/28/15**
45	Electrical and MCC Gear	0%	45 days	Mon 6/29/15	Fri 8/28/15
46	Grounding	0%	10 days	Mon 7/27/15	Fri 8/7/15
47	Conduit, Wiire, and Instrumentation	0%	10 days	Mon 8/17/15	Fri 8/28/15
48	**Construction**	**0%**	**95 days**	**Mon 7/6/15**	**Fri 11/13/15**
49	**Pre-Mobilization Work**	**0%**	**20 days**	**Mon 7/6/15**	**Fri 7/31/15**
50	Relocate Car Port	0%	10 days	Mon 7/6/15	Fri 7/17/15
51	Relocate Crusher House Building Heater & Propane Tank	0%	20 days	Mon 7/6/15	Fri 7/31/15



DRA TAGGART

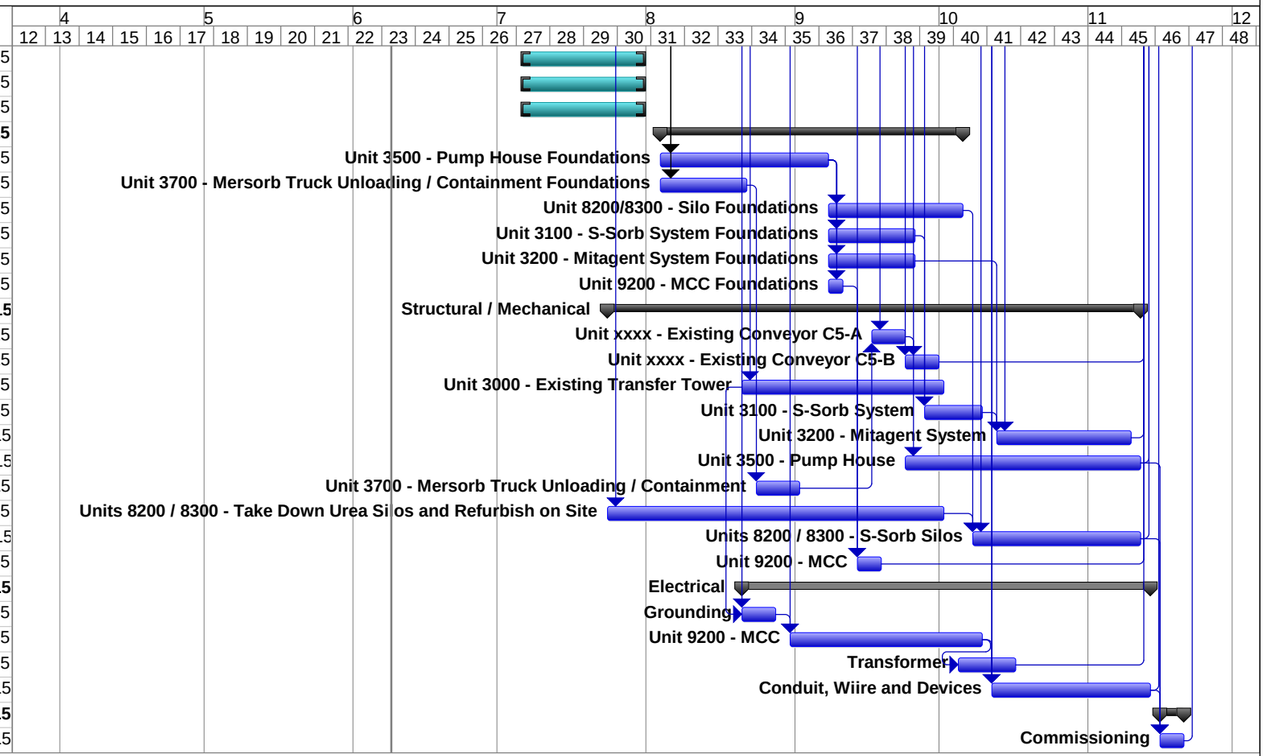
Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Progress			
Split	External Tasks	Inactive Summary	Manual Summary	Deadline			
Milestone	External Milestone	Manual Task	Start-only				
Summary	Inactive Task	Duration-only	Finish-only				

Date: Tue 6/9/15

AJG Pleasants Power Section 45 Preliminary Schedule

5 Days / Week Schedule

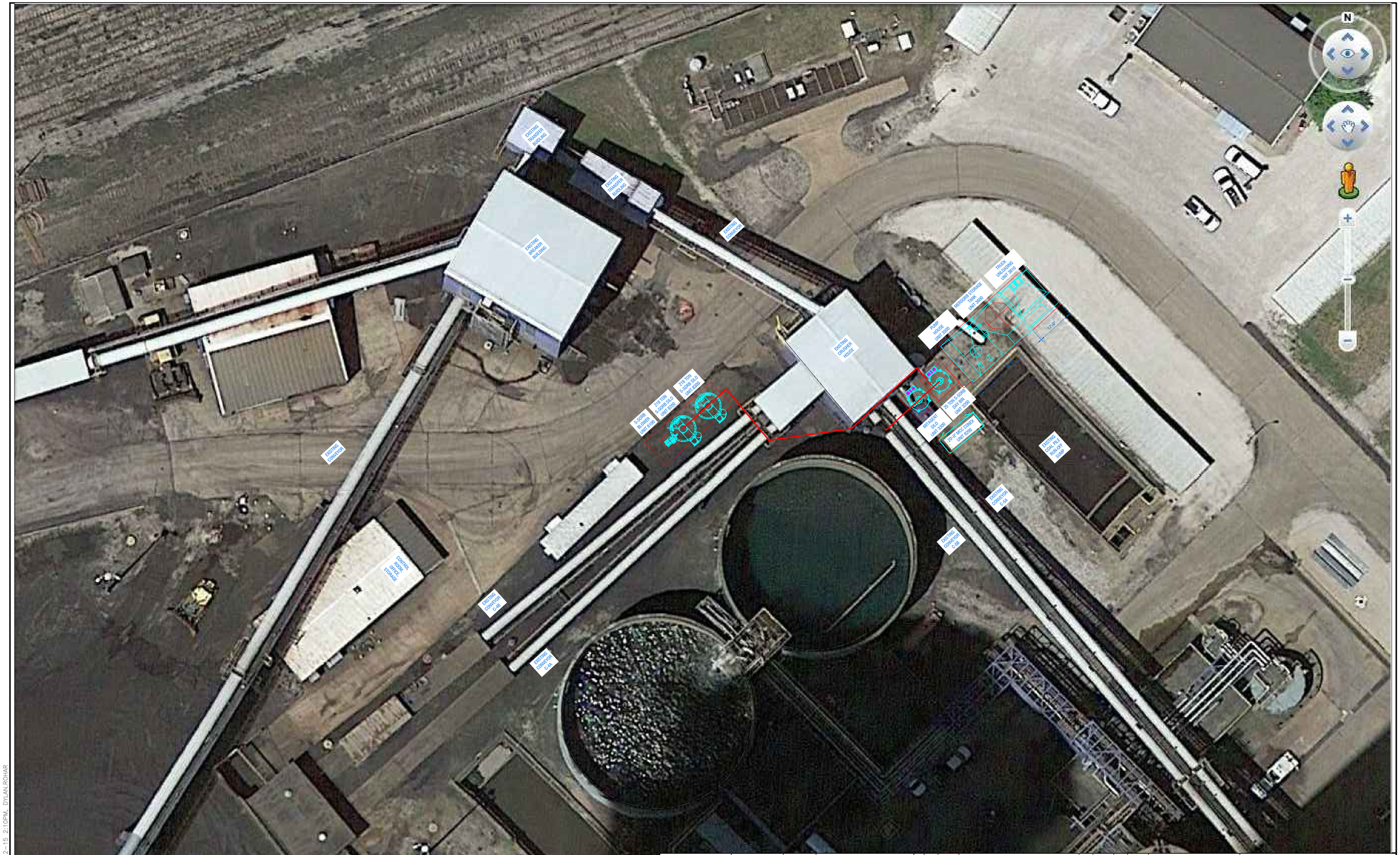
ID	Task Name	% Complete	Duration	Start	Finish
52	Clean Out Old Coal Handling Building	0%	20 days	Mon 7/6/15	Fri 7/31/15
53	Disconnect Piping from Urea Silos	0%	20 days	Mon 7/6/15	Fri 7/31/15
54	Disconnect Electrical from Urea Silos	0%	20 days	Mon 7/6/15	Fri 7/31/15
55	**Civil**	**0%**	**45 days**	**Tue 8/4/15**	**Mon 10/5/15**
56	Unit 3500 - Pump House Foundations	0%	25 days	Tue 8/4/15	Mon 9/7/15
57	Unit 3700 - Mersorb Truck Unloading / Containment Foundations	0%	14 days	Tue 8/4/15	Fri 8/21/15
58	Unit 8200/8300 - Silo Foundations	0%	20 days	Tue 9/8/15	Mon 10/5/15
59	Unit 3100 - S-Sorb System Foundations	0%	14 days	Tue 9/8/15	Fri 9/25/15
60	Unit 3200 - Mitagent System Foundations	0%	14 days	Tue 9/8/15	Fri 9/25/15
61	Unit 9200 - MCC Foundations	0%	3 days	Tue 9/8/15	Thu 9/10/15
62	**Structural / Mechanical**	**0%**	**79 days**	**Fri 7/24/15**	**Wed 11/11/15**
63	Unit xxxx - Existing Conveyor C5-A	0%	5 days	Thu 9/17/15	Wed 9/23/15
64	Unit xxxx - Existing Conveyor C5-B	0%	5 days	Thu 9/24/15	Wed 9/30/15
65	Unit 3000 - Existing Transfer Tower	0%	30 days	Fri 8/21/15	Thu 10/1/15
66	Unit 3100 - S-Sorb System	0%	10 days	Mon 9/28/15	Fri 10/9/15
67	Unit 3200 - Mitagent System	0%	20 days	Tue 10/13/15	Mon 11/9/15
68	Unit 3500 - Pump House	0%	35 days	Thu 9/24/15	Wed 11/11/15
69	Unit 3700 - Mersorb Truck Unloading / Containment	0%	7 days	Mon 8/24/15	Tue 9/1/15
70	Units 8200 / 8300 - Take Down Urea Silos and Refurbish on Site	0%	50 days	Fri 7/24/15	Thu 10/1/15
71	Units 8200 / 8300 - S-Sorb Silos	0%	25 days	Thu 10/8/15	Wed 11/11/15
72	Unit 9200 - MCC	0%	5 days	Mon 9/14/15	Fri 9/18/15
73	**Electrical**	**0%**	**61 days**	**Fri 8/21/15**	**Fri 11/13/15**
74	Grounding	0%	5 days	Fri 8/21/15	Thu 8/27/15
75	Unit 9200 - MCC	0%	30 days	Mon 8/31/15	Fri 10/9/15
76	Transformer	0%	10 days	Mon 10/5/15	Fri 10/16/15
77	Conduit, Wiire and Devices	0%	25 days	Mon 10/12/15	Fri 11/13/15
78	**Commissioning**	**0%**	**5 days**	**Mon 11/16/15**	**Fri 11/20/15**
79	Commissioning	0%	5 days	Mon 11/16/15	Fri 11/20/15



DRA TAGGART

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Progress	
Split		External Tasks		Inactive Summary		Manual Summary		Deadline	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			

Attachment E
Plot Plan



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DESIGN REF.	DRAWING No.	DESCRIPTION
DESIGN	REFERENCE DRAWINGS	

REV	BY	DATE	REVISIONS	CHK	DATE	S.I.	DATE
C	DTR	06-02-15	GENERAL UPDATES				
B	DTR	05-27-15	GENERAL UPDATES				
A	DTR	05-14-15	INITIAL				

DRA TAGGART DWG No

CLIENT		
PROJ. MNGR.		
PROF. ENG.		
PROJECT ENG.		
PROCESS ENG.		
D.O. MNGR.		
SECT. LEADER		
CHECKED		
DRAWN		
APPROVAL	SIGNATURE	DATE

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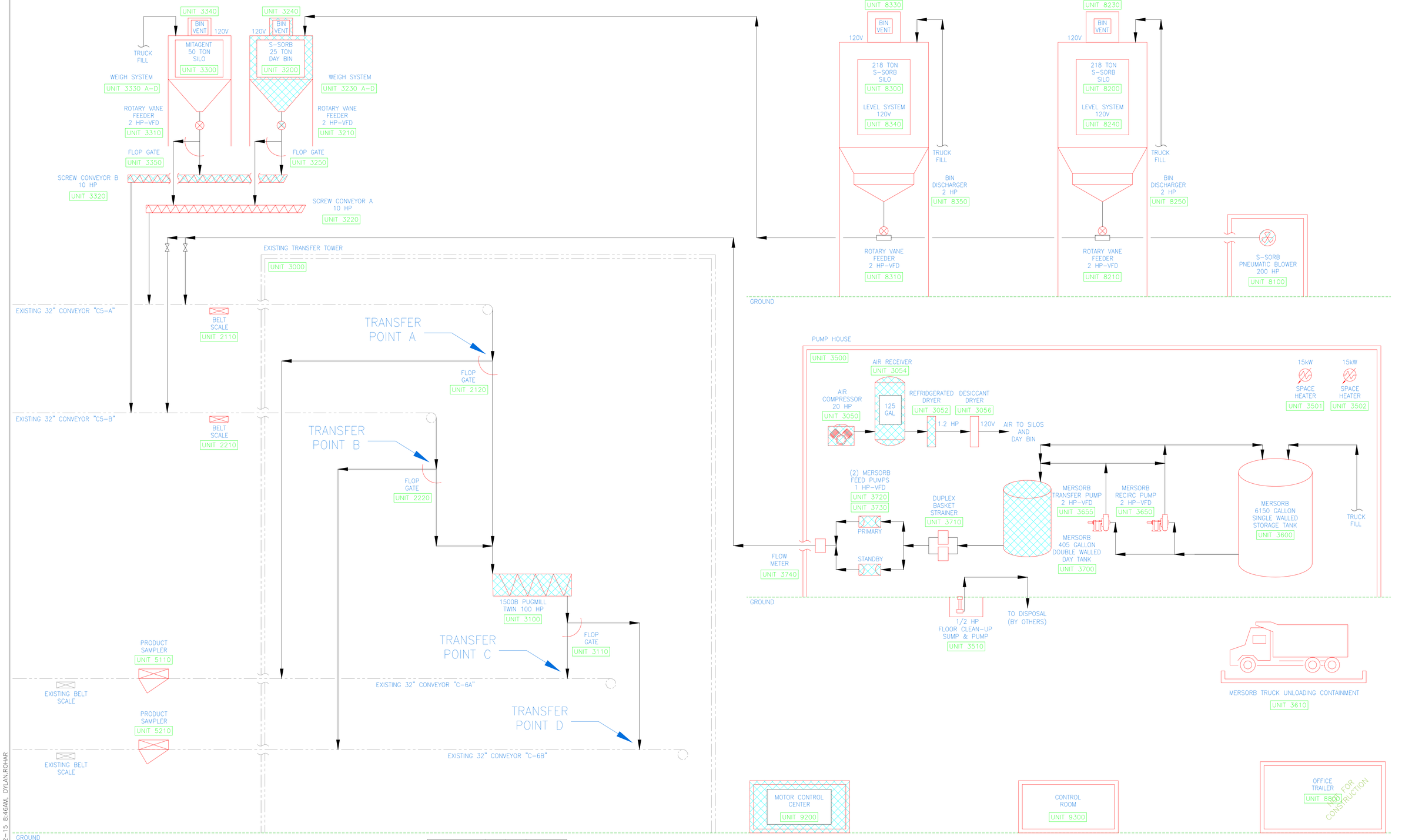
Canonsburg, PA 15317
Tel: +1 724 754 9800
Fax: +1 724 754 9801
www.DRAglobal.com

TITLE
AJG COAL INC
PLEASANTS POWER STATION
REFINED COAL FACILITY
PLOT PLAN

SIZE	DWG No.	REV.	SCALE
D	4932-0001-0001	B	NONE

4932-0001-0001.DWG, Jun-2-15 2:10PM, DYLAN.ROHAR

Attachment F
Detailed Process Flow Diagrams



Plant Feed Rates (TPH)		Annual Max Burn (Tons)	Tons/Week	Hours/Week (Max Reclaim)
750	Conveyor 5-A	3,400,000	65.385	44
750	Conveyor 5-B			
1500	Total			

Storage Capacity - 5 Days (Design Application Rate)

Maximum Burn Tons per Day	Mersorb*			S-Sorb*			Mitagent*		
	GPD	Storage Req'd	Tanks (Gal)	TPD	Storage (Tons)	Silo (Tons)	TPD	Storage (Tons)	Silo (Tons)
13,000	220	1,099	(1) - 6,150	34	172	(2) - 218	8.6	43	(1) - 50

Chemical	Mersorb*			S-Sorb*			Mitagent*		
Application Rate	Low	Design	High	Low	Design	High	Low	Design	High
Percent by Weight	0.005%	0.0120%	0.022%	0.08%	0.264%	0.56%	0.02%	0.066%	0.14%
Total Flow (TPH)	0.08	0.18	0.33	1.20	3.96	8.40	0.30	0.99	2.10
Total Flow (GPH)	10.56	25.35	46.48	-	-	-	-	-	-

* Application Rates based on 1500 TPH Max Reclaim

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REV	BY	DATE	REVISIONS	CHK	DATE	S.L.	DATE
F	DTR	06-11-15	ADDED SCREW CONVEYOR				
E	DTR	06-02-15	UPDATED UNIT NUMBERS				
D	DTR	05-27-15	GENERAL UPDATES				
C	DTR	05-14-15	DAY BIN AND MITAGEN SILO INTO TRANSFER TOWER				
B	BJD1	04-21-15	MOVE 405 GAL MERSORB INTO TRANSFER TOWER				
A	DTR	03-11-15	INITIAL				

DESIGN REF. | DRAWING No. | DESCRIPTION
DESIGN | REFERENCE DRAWINGS

DRA TAGGART DWG No

CLIENT		
PROJ. MNGR.		
PROF. ENG.		
PROJECT ENG.		
PROCESS ENG.		
D.O. MNGR.		
SECT. LEADER		
CHECKED		
DRAWN		
APPROVAL	SIGNATURE	DATE

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Fax: +1 724 754 9801
www.DRAglobal.com

TITLE
AJG COALL INC
PLEASANTS POWER STATION
REFINED COAL FACILITY
FLOWSHEET

SIZE D | DWG No. 4932-0001-0003 | REV. F | SCALE NTS

4932-0001-0003.DWG, Jun-12-15 8:46AM, DYLAN.ROHAR

ATTACHMENT G
PROCESS DESCRIPTION (CONFIDENTIAL
BUSINESS INFORMATION)

Production of Refined Coal

using the

Chem-Mod Process

This report contains confidential and proprietary information regarding the Chem-Mod Process. This report is intended for use in applications to regulatory entities for construction permits. Recipients of this package may use the information for this intended purpose only. Recipients may not disseminate information regarding the chemical components, reactions, or processes to others without the express permission of Chem-Mod LLC.

Purpose

The facility and process described in this report is designed to produce a Refined Coal fuel as described in Title 26, Section 45 of the United States Code. This code requires that for a fuel to qualify as a Refined Coal, it must exhibit reduced emission of Nitrogen Oxides (NO_X) combined with reduced emission of either Sulfur Dioxide (SO_2) or Mercury (Hg) when burnt in the production of steam.

Most Refined Coal production facilities will be constructed at the facility which will burn the fuel (host facility). This eliminates the need to protect the Refined Coal from weathering as it can be produced and supplied on a just in time basis. Likewise it allows for reliable compliance with the regulatory requirement that the Refined Coal be burned in the production of steam. This report is written to describe such an installation.

Process

The Chem-Mod Process uses proprietary chemical sorbent additives to reduce the formation of NO_X and for the capture of Hg when coal is burned to produce steam for commercial use, industrial processes, or the generation of electricity.

The Chem-Mod solution is a dual-reagent coal pretreatment method which uses a halogen for mercury oxidation and a dry-powder sorbent for capture of mercury and other oxidized metals. The halogen is added to the coal as a salt solution, in this case 52% $CaBr_2$ in water. The Chem-Mod trade name for this additive is MerSorb. The dry powder sorbent is made from raw feed, product and by-product materials from the cement industry. The Chem-Mod trade name for this additive is S-Sorb. The S-Sorb properties are specified for different rank coals to avoid unwanted balance-of-plant (BoP) or emissions issues. The component materials in the S-Sorb are dictated by the applicable specification. These two reagents are typically added to the coal when the coal is bunkered for firing in the steam generator. The product of the coal and additives is called Refined Coal.

When coal is burned Mercury (Hg) is released from the mineral matrix in elemental form (Hg^0). Mercury in coal is mainly associated with sulfide minerals such as pyrite. The Hg^0 is gaseous at all temperatures throughout the boiler and air quality control (AQC) system, and as it is comparatively non-reactive, most all is released up the stack. When refined coal is burned the MerSorb is thermally decomposed in the furnace and the Bromine (Br) reacts with Hg^0 to produce the oxidized form (Hg^{2+}). The Hg^{2+} form is very reactive and can be removed from the flue gases in a number of ways. It can react with solid particles such as the S-Sorb. It also can be absorbed on powdered activated carbon (PAC) or in wet scrubber liquor. The metals captured by the S-Sorb, including Hg are bound in a zeolite-type structure, which are not leachable to the environment. TCLP data show that Chem-Mod refined coal ash has lower levels of most constituents compared to untreated coal. TCLP levels are consistently less than RCRA limits and in most all cases are below Drinking Water limits. In the Chem-Mod solution, NO_X

emissions are reduced by reaction with the S-Sorb. NO_X is reduced by simple base-acid chemical reactions with elements in the S-Sorb.

Chem-Mod in cooperation with B&W also offers an alternative TriSorb (three-sorbent) solution, which includes the use of Mitagent™ in conjunction with the original solution (MerSorb plus S-Sorb). Mitagent reduces the amount of Br required for Hg oxidation, and also reacts with non-metal gas-phase species such as Selenium (Se), Phosphorus (P) and Arsenic (As). The latter two elements are known to cause SCR catalyst deactivation. Phosphorus occurs in higher concentrations in some Powder River Basin coals, and As is common in high-sulfur Eastern coals. It should be added that the S-Sorb also is known to react with gas-phase As and consequently improve catalyst lifetimes.

Facility

Sorbents are delivered to the facility in various ways, depending upon the production capacity of the facility. S-Sorb and Mitagent are delivered as a dry bulk product usually supplied in pneumatic tank trucks or rail cars. MerSorb is provided as an aqueous solution delivered in tank trucks, rail cars, or chemical totes.

Upon receipt, the sorbents are conveyed or pumped to appropriate on site storage facilities; tanks or tote storage areas for the liquid MerSorb and silos for the dry S-Sorb. Again, the size of the on site storage containers are determined by the production capacity of the facility to provide a reasonable on site volume for production. Containment structures will be constructed to comply with applicable regulations.

Coal is diverted from the existing host plant feed system to the Refined Coal facility for the purpose of adding the sorbents to produce a Refined Coal. The conveyors and mixers of the Refined Coal facility are of sufficient capacity to process all coal used by the host facility at the maximum rate the host facility reclaims the coal from its storage yard. The coal is conveyed to the mixer were it is combined with the S-Sorb, MerSorb, and possibly Mitagent. The MerSorb is pumped from the storage tank(s) to the mixer using a metering pump which can be controlled to provide the proper mass of sorbent to the coal stream. The S-Sorb and Mitagent are conveyed to the mixer using proportional feeders which can be controlled to provide the required mass of sorbent to the coal stream. The coal and sorbents are then thoroughly mixed in a mechanical device sized to provide even distribution of the sorbents with the coal. The Refined Coal is then conveyed back to the host facility's coal reclaim system for use in the furnaces.

Scales, flow meters, volumetric controls, pressure, temperature, and other instrumentation is provided as necessary to properly control the process. Inputs from the measuring devices are fed to a process control system which controls all components to properly proportion and blend the components to produce a consistent product.

The facility is designed such that all coal flow can bypass the facility at any time so as not to adversely impact operation of the host facility in the unlikely event that the Refined Coal facility is inoperable.

Effects on Host Facility

The primary effect on the host facility is the reduction of NO_X and Hg air emissions from the facility. NO_X is reduced by adsorption in the boiler. Hg is reduced by the oxidation of elemental mercury and the subsequent capture of mercuric compounds in ceramicized matrices in the ash which is captured as fly ash or bottom ash in the host facility's collection systems.

The Refined Coal facility may add three to five transfer points to the fuel handling system, depending on the configuration of the existing reclaim system. These transfer points will be controlled for fugitive dust in the same manner as existing systems or as required by regulation.

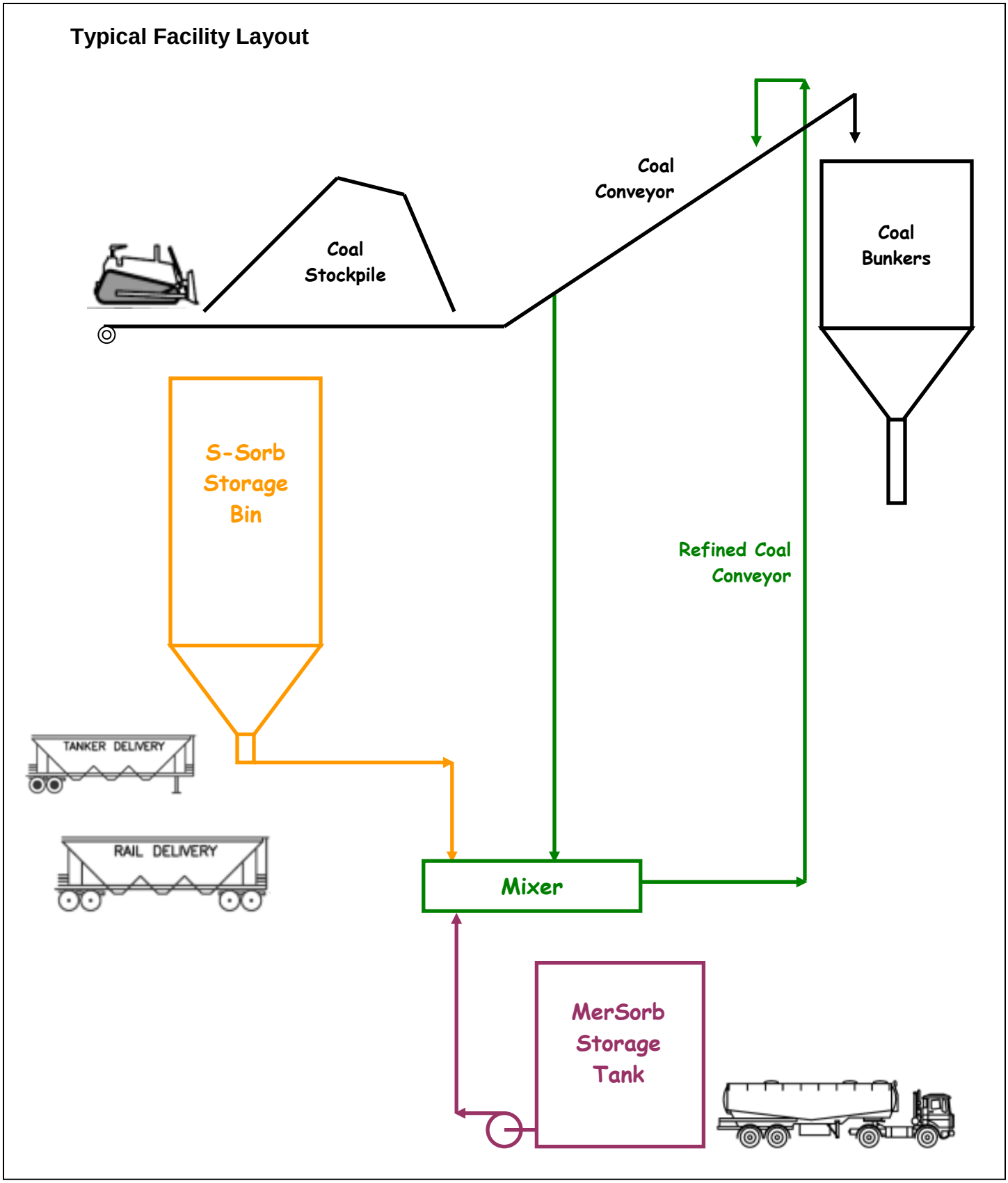
The sorbent additives essentially increase the "ash" component of the fuel and report to the ash collection equipment of the host facility. The sorbents will typically increase the ash percentage of the fuel 0.3%. The host facility must be capable of handling this increased ash loading in the flue gas particulate removal and handling systems.

In some facilities burning subbituminous coals, boiler deposits and corrosion of downstream flue gas components have been observed. These detrimental effects have been resolved by changes in plant operating procedures and in some cases material retrofits.

Stations have benefitted from increased SCR catalyst life due to S-Sorb and Mitagent reacting with gas phase Arsenic and Phosphorous.

Stations equipped with wet flue gas desulfurization equipment may utilize the Tri-Sorb version of refined coal to allow use of halogen oxidizers for Hg control by counteracting the effect halogens have on Selenium species which may cause water quality issues in scrubbed units.

Typical Facility Layout



Introduction

This document provides a detailed description of the layout and operation of the proposed Refined Coal System that will be installed at the Pleasants Power Station. For a general introduction to the Refined Coal program please refer to "Production of Refined Coal utilizing the Chem Mod Process". That document provides a description of the Refined Coal Program (IRS Section 45), information on the sorbents used in the process, how the sorbents reduce emissions, and description of a typical installation.

System Overview

The Refined Coal System at Pleasants will consist of a mixer and the associated chemical application equipment necessary to add the three required Chem-Mod sorbents to the coal necessary to produce refined coal. The unit numbers called out in this document refer to the equipment designations used in the process flow diagram (DRA Taggart Drawing 4932-0001-0003) which provides a graphic presentation of the system.

Pug Mill Mixer

The mixer (UNIT 3150) will be installed in the transfer tower between Conveyors C5A/B and Conveyors C6A/B. The system will be configured with flop gates that allow the coal to either be fed to the mixer to produce refined coal or to bypass the mixer so that the boiler can be operated on coal directly reclaimed from the yard to minimize detrimental impact on the power station availability. The mixer will be a twin screw pug mill which has a capacity of processing 1500+ tons of coal per hour. The three sorbents (MerSorb, S-Sorb, and Mitagent) will be added to the coal at the tail end of Conveyors C5A and/or C5B.

MerSorb System

The MerSorb application system will be located in a new pumphouse adjacent to the crusher house. The primary components of this system will be a 405 gallon day storage tank (UNIT 3630), application pumps (UNITS 3650, 3655), and a flow meter.

S-Sorb System

The S-Sorb application system will be located on the ground level adjacent to the crusher house. The primary components will be a 25 ton day bin (UNIT 3100), rotary vane feeder (UNIT 3130) to control the application rate, and a screw conveyor (UNIT 3120) to move the S-Sorb to the coal conveyors.

Mitagent System

The Mitagent application system will be located on the ground level adjacent to the crusher house. The primary components will be a 50 ton feed silo (UNIT 3200), rotary vane feeder (UNIT 3230) to control the application rate, and a screw conveyor (UNIT 3120) to move the S-Sorb to the coal conveyors.

Bulk Storage

In addition to the application systems there will be bulk storage systems for MerSorb and S-Sorb. For S-Sorb there will be two 218 ton capacity silos (UNITS 8200/8300) and a transfer blower (UNIT 8100). For MerSorb there will be a 6150 gallon storage tank (UNIT 3600) and transfer pumps (UNITS 3610/3620). These systems provide for bulk storage of sorbents on site to ensure availability. They also provide the means to transfer from the bulk storage containers to the day bin/tank for application.

Power and Control

The facility has a new Motor Control Center to provide power to all components. The MCC will be fed from the station bus. The facility has a PLC based control system. The PLC receives input from process instrumentation and provides output control signals to all components in the system. The PLC will be installed along with the MCC in a new electrical building.

Process

The coal being fed to the boiler house will be diverted from the discharge of Conveyors C5A and C5B into the mixer. Scales installed in Conveyors C5A and C5B sense the coal flow rate to the mixer and transmit that information to the PLC. The facility PLC calculates the required flow rates of MerSorb, S-Sorb, and Mitagent for the given coal flow.

MerSorb will be pumped from the day tank by an application pump, through a flow meter and into distribution manifolds on conveyors C5A and/or C5B where it will be applied to the coal. The application pumps will be fitted with variable frequency drives that will be controlled by the PLC. The measured flow rate will be communicated to the PLC which continuously adjusts the pump speed to match the flow of MerSorb to the coal flow.

S-Sorb will be fluidized in the day bin and discharged via a rotary vane feeder. The vane feeder will be fitted with a variable frequency drive that will be controlled by the PLC. The day bin sits on load cells which supply net weight indication to the PLC. As S-Sorb is discharged from the bin the change in weight will be used by the PLC to calculate the application rate of the S-Sorb. The PLC continuously adjusts the vane feeder to match flow of S-Sorb to the coal flow. The S-Sorb will be discharged from the vane feeder into a transfer screw conveyor which discharges the S-Sorb and Mitagent where they will be applied to the coal on conveyors C5A and/or C5B.

Mitagent will be fluidized in the silo and discharged via a rotary vane feeder. The vane feeder will be fitted with a variable frequency drive that will be controlled by the PLC. The day bin sits on load cells which supply net weight indication to the PLC. As Mitagent is discharged from the bin the change in weight will be used by the PLC to calculate the application rate of the Mitagent. The PLC continuously adjusts the vane feeder to match flow of Mitagent to the coal flow. The S-Sorb will be discharged from

the vane feeder into a transfer screw conveyor which discharges the Mitagent and S-Sorb where they will be applied to the coal on conveyors C5A and/or C5B.

Conveyors C5A and/or C5B will discharge the Coal, MerSorb, S-Sorb, and Mitagent into the mixer which will thoroughly blend them. The mixer will then discharge the now Refined Coal onto the plant conveyors C6A and/or C6B where it subsequently flows to the silos for each boiler.

Application Rates

The required sorbent application rates are established to comply with the NOx and Hg emission reduction requirements of the Section 45 Refined Coal program. The required rate per unit of coal is determined in testing at the University of North Dakota's Energy and Environmental Research Center. These rates are quantified as a percentage of sorbent by weight to the coal. Over time these rates may vary as there are changes in the coal being burned and improvements to the sorbents are made. Additionally rates may change with changes to the boiler and associated pollution control devices.

Since the completion of the original test program and permitting process, Chem-Mod has worked with the various utilities burning refined coal to reduce the sorbent applications necessary to qualify the coal as refined coal. In the case of the Pleasants installation the current application rates for the sorbents have been significantly reduced due to enhancements to the sorbents and the emission control equipment installed at Pleasants. For Pleasants, the application rates that will be used are given in the table below.

	Lo		Hi				
Coal Reclaim Rate	400	TPH	1500	TPH	**Coal Full Burn Rate**	542 TPH	13,000 TPD
MerSorb Rate	0.012%						
	6.76	GPH	25.35	GPH	220 GPD at Full Burn		80,197 GPY at Full Burn
S-Sorb Rate	0.264%						
	1.056	TPH	3.96	TPH	34 TPD at Full Burn		12,410 TPY at Full Burn
Mitagent Rate	0.066%						
	0.264	TPH	0.99	TPH	9 TPD at Full Burn		3,285 TPY at Full Burn

It is anticipated that these rates will remain in effect for the life of the project; however they may be changed in order to keep the refined coal in compliance with the IRS regulation.

Attachment H
Material Safety Data Sheets (MSDS)

Quality Magnetite LLC

2620 Big Sandy Road
Kenova, WV 25530

Material Safety Data Sheet

U.S. Department of Labor

IDENTITY *(as Used on Label and List)*
MAGNETITE // COAL FLOAT

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's name **QUALITY MAGNETITE LLC**	Emergency Telephone Number **(304) 453-2222**
Address *(Number, Street, City, State and ZIP Code)* **2620 BIG SANDY ROAD**	Telephone Number for Information **(304) 453-2222**
KENOVA, WV 25530	Date Prepared **4/13/13**

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
TRADE NAME: MAGNETITE // COAL FLOAT				
SYNONYMS: IRON OXIDE; BLACK IRON; MAGNETITE BLACK; IRON BLACK; BLACK IRON OXIDE				
CHEMICAL FAMILY: MINERAL				

COMPONENT: FERRIC OXIDE RED	**COMPONENT:** SILICON DIOXIDE
CAS NUMBER: 1309-37-1	**CAS NUMBER:** 7631-86-9
PERCENTAGE: <97	**PERCENTAGE:** <3.5

COMPONENT: FERRIC-FERROUS OXIDE	**COMPONENT:** QUARTZ
CAS NUMBER: 1317-61-9	**CAS NUMBER:** 14808-60-7
PERCENTAGE: <97	**PERCENTAGE:** <3.5

Section III—Physical/Chemical Characteristics

Boiling Point **Not applicable**		Specific Gravity (H_20 = 1) **5.1**	
Vapor Pressure (mm Hg) **Not applicable**		Melting Point **2851 F (1566 C)**	
Vapor Density (AIR = 1) **Not applicable**		Evaporation Rate (Butyl Acetate = 1) **Not applicable**	

Solubility in Water **Insoluble**

Appearance and Odor **Solid, Grey to Black, Powder, Odorless**

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used) **Not applicable**	Flammable Limits **Not applicable**	LEL **Not applicable**	UEL **Not applicable**

Extinguishing Media **Use extinguishing agents appropriate for surrounding fire.**

Special Fire Fighting Procedures **Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.**

Unusual Fire and Explosion Hazards **Negligible fire hazard.**

Section V—Reactivity Data

Stability **Stable at normal temperatures and pressures**	Unstable **Not**		Conditions to Avoid **Avoid generating dust.**
	Stable **at normal temperatures and pressures**		
Incompatibility *(Materials to Avoid)* **Oxidizing materials**			
Hazardous Decomposition or Byproducts **Thermal decomposition products: miscellaneous decomposition products.**			
Hazardous Polymerization **Will not polymerize**	May Occur **Not applicable**		Conditions to Avoid **Not applicable**
	Will Not Occur **Not applicable**		

Section VI—Health Hazard Data

Route(s) of Entry	Inhalation? **Yes**	Skin? **Yes**	Ingestion? **Yes**

Health Hazards *(Acute and Chronic)* **Respiratory tract irritation, skin irritation, eye irritation**

Carcinogenicity **Not classified as Human Carcinogen**	NTP? **No**	IARC Monographs? **Human Inadequate Evidence, Animal suggest none.**	OSHA Regulated? **No**

Signs and Symptoms of Exposure **Difficulty of breathing, chills, fever, nausea, vomiting, diarrhea, chest pain, headache, hyperactivity**

Medical Conditions
Generally Aggravated by Exposure **Respiratory**

Emergency and First Aid Procedures **Inhalation: If adverse effects occur, remove to uncontaminated area. Give CPR if not breathing, get immediate medical attention.**
Skin Contact: Wash with soap or mild detergent and large amounts of water.
Eye Contact: Flush eyes with plenty of water. Get medical attention if irritation develops or persists.

Section VII—Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled **Keep out of water supplies and sewer, clean up residue with high-efficiency particulate vacuum.**

Shipping Class: 55 **NFC # 044780-01 Bags** **044780-02 Box or Drum**

Waste Disposal Method **This product, as supplied, when discarded or disposed of, is not hazardous waste according to 40 CFR 261. Dispose in accordance with all applicable regulations**

Precautions to Be Taken in Handling and Storing **Store and handle in accordance with all current regulation and standards. Store outside or in a detached building. Avoid creating dust, contact with eyes, skin and clothing.**

Other Precautions **None**

Section VII—Control Measures

Respiratory Protection *(Specify Type)* **A NIOSH approved air-purifying respirator with approved cartridge or canister may be appropriate under extreme circumstances where airborne concentrations are expected to exceed exposure limits.**

Ventilation	Local Exhaust **Preferred means for controlling exposure.**	Special **Not applicable.**
	Mechanical *(General)* **Preferred means for controlling exposure.**	Other **Not applicable.**
Protective Gloves **Wear appropriate chemical resistant gloves.**		Eye Protection **Wear appropriate splash resistant safety goggles. Provide an emergency eye wash fountain and / or quick rinse shower in immediate work area.**
Other Protective Clothing or Equipment **Wear appropriate chemical resistant clothing.**		
Work/Hygienic Practices **Avoid causing dust – keep work area well ventilated.**		

MERSORB
SAFETY DATA SHEET

Revision Date: 05/11/2015 Supersedes: 11/15/2012 Version 5

SECTION 1: IDENTIFICATION OF SUBSTANCE/MIXTURE AND COMPANY

Product Identifier

Product Form: Mixture

Product Name: MerSorb

CAS No. 7789-41-5

Formula: $CaBr_2 + H_2O$

Chemical Family: Halide Salt Solution

Synonyms: Calcium Bromide Solution, Brine Solution

Intended Use of Product

Coal additive for Mercury Emission Reduction

Name, Address, and Telephone Number of Responsible Party

Chem-Mod LLC
2 Pierce Place
20th Floor
Itasca, IL 44224
Telephone: 866-846-4789

Emergency Telephone Number:

1-412-889-7718

SECTION 2: HAZARDS IDENTIFICATION

Classification of Substance (GHS-US)

Serious Eye Irritant, Category 2A
Skin Irritant, Category 3

Label Elements (GHS-US)

Hazard Pictogram(s)

Signal Word

Warning

Hazard Statements

H319 Causes serious eye irritation.
H316 Causes mild skin irritation.
H303 May be harmful if swallowed.
H333 May be harmful if inhaled.

Precautionary Statements

P280 Wear eye protection, long sleeves and pants, protective gloves.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+313 IF EYE IRRITATION PERSISTS: Seek medical advice/attention.
P264 Wash hands, forearms, and exposed areas thoroughly after handling.
P363 Wash contaminated clothing before reuse.
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Drink plenty of water.
P261 Avoid breathing mist, spray, or vapors.
P284 In case of inadequate ventilation wear respiratory protection.

Other Hazards

No additional information available.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	FORMULA	CAS No.	%	GHS-US Classification
Calcium Bromide	$CaBr_2$	7789-41-5	≥ 51.5	Serious Eye Irritant, Category 2A Skin Irritant, Category 3
Water	H_2O	7732-18-5	≤ 48.5	None

SECTION 4: FIRST AID MEASURES

First Aid Measures

General:

Never give anything by mouth to an unconscious person.
If you feel unwell, seek medical advice.

Eye Contact:

Rinse thoroughly with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF irritation continues, seek immediate medical assistance.

Skin Contact:

Wash thoroughly with soap and water. Remove contaminated clothing.

Ingestion:

Rinse mouth, do not induce vomiting. Drink plenty of water.

Inhalation:

When symptoms occur: go to open air and ventilate suspected area. Remove person to fresh air and rest in position for comfortable breathing. If you feel unwell, seek medical advice.

Symptoms (most important both acute and delayed)

After eye contact, may cause eye irritation

After skin contact, may cause irritation

After ingestion, may cause nausea

After inhalation, may cause irritation of upper respiratory tract, drowsiness, or dizziness

Indication immediate medical attention and special treatment is needed

Discomfort or distress in affected individual

SECTION 5: FIRFIGHTING MEASURES

Extinguishing Media:

MerSorb is a nonflammable solution.

For fires involving materials surrounding or containing this product, all conventional media correct for the material involved are acceptable.

Special Hazards:

Exposure to elevated temperature (>700°C/1300°F) may cause thermal decomposition resulting in release of bromine, hydrogen bromide, and/or calcium oxides.

Special Protective Equipment / Precautions for Firefighters:

Firefighters should use SCBA in enclosed structures.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions / Protective Equipment:

Wear appropriate PPE, including:
- Safety glasses or goggles
- Long sleeves and pants
- Rubberized gloves

Ventilate area to clear mist or vapors

Emergency Procedures:

Stop leak if possible and safe to do so.

For large spills, dike the area and collect the material for re-use or later disposal.

Collect remaining/small spill amounts with the aid of wet vacuum and water absorbent material. Place sorbents into containers for later disposal. Move containers from spilled area.

Environmental Precautions:

Calcium Bromide is not identified as a hazardous material.

Methods and Material for Containment and Disposal:

Use water proof diking materials to contain large leaks.

Use pumps or wet vacuums to greatest extent possible to recover spilled material into drums, tanks, or other containers.

While there is no discharge limit for Calcium Bromide solutions, good practice includes avoiding discharge to the environment. Dispose of collected absorbed material in accordance with federal, state, and local regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling:

Wear appropriate PPE, including:
- Safety glasses or goggles
- Long sleeves and pants
- Rubberized gloves

Avoid contact with eyes or skin.

Supply trucks are offloaded by pressurizing tank truck to low pressure (max 14 psig [1 bar]). A leak during transfer may create a mist or vapor cloud. Avoid entering such clouds without a NIOSH/MSHA approved organic/acid gas cartridge.

Conditions for Safe Storage:

Storage containers (tanks, drums, etc.) should be constructed of corrosion resistant materials or coated with corrosion resistant material. Recommended materials of construction for containers are polyethylene, stainless steel, carbon steel with all internal surfaces coated with epoxy.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters (Occupational Exposure Limits or Biological Limits)

Calcium Bromide		
USA ACGIH	TLV (TWA, STEL, CEIL)	Not established
USA OSHA	PEL (TWA, STEL, CEIL)	Not established

Engineering Controls:

If fugitive release areas are enclosed, provide local exhaust ventilation for those areas. Where there is possibility of exposure, eyewash station should be provided close to the work area.

Individual Protection Measures

Eye/Face Protection: For normal operations, safety glasses with side shields are required. When performing operations on pressurized vessels (offloading delivery trucks) or when performing maintenance where spray of material is possible, wear tight fitting chemical goggles.

Skin Protection: Use rubberized work gloves. Long sleeved shirts and long pants should be worn. Protective barrier creams may be used on exposed skin surfaces.

Respiratory: A respirator is not indicated under normal handling. Should a leak result in misting or vapor cloud, allow the cloud to dissipate before entering the area. If a vapor cloud must be entered, use NIOSH/MSHA approved organic/acid gas cartridge respirator.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid.
Odor:	Normally odorless but may have faint “earth” odor
Odor threshold:	Not Available
pH:	6 to 8
Melting/freezing point:	Not Available
Boiling point:	264°F
Flash point:	Not Applicable
Evaporation rate:	Not Available
Flammability:	Non-flammable
Flammability limits:	Not Applicable
Explosive limits:	Not Applicable

Vapor pressure: Not Available

Vapor density: Not Available

Relative density: > 1.68 (water = 1.0)

Solubility: Miscible

Partition coefficient: Not Available

Auto-ignition temp: Not Applicable

Decomposition temp: > 1300°F

Viscosity: Varies with temperature

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not reactive under normal pressure and temperature

Chemical stability: Stable under normal pressure and temperature

Possibility of Hazardous Reactions: None

Conditions to Avoid (Stability): None known

Incompatible Materials: Strong oxidizing agents or water reactive materials.

Hazardous Decomposition Products: Thermal decomposition may produce hydrogen bromide, bromine, or oxides of calcium.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity Not Classified

Calcium Bromide	
LD50 Acute Oral Toxicity – rat	4,068 mg/kg
LD50 Acute Dermal Toxicity – rabbit	2,008 mg/kg
LC50 Inhalation Toxicity – rat	>203 mg/l

Serious Eye Damage / Irritation:

Causes serious eye irritation.

Prolonged exposure to elevated concentrations of this material is corrosive to the eyes and may cause burns or external ulcers. Direct contact with the aqueous solutions may cause conjunctival edema and corneal damage. Prolonged contact to concentrated solutions may cause conjunctivitis.

Skin Corrosion / Irritation:

Causes slight skin irritation.
Prolonged exposure to elevated concentrations of this material is corrosive to the skin. During prolonged skin contact, this material can penetrate the unprotected skin slowly. The extent of damage depends on duration of contact. Chronic dermatitis may follow repeated contact at elevated concentrations

Respiratory or Skin Sensitization:

The results of a test on guinea pigs showed this substance to be a weak skin sensitizer. No results for respiratory sensitization.

Germ Cell Mutagenicity:

Not classified

Carcinogenicity:

No component of this product is present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by the following programs:

NTP: US. National Toxicology Program (NTP) Report on Carcinogens
IARC: US. IARC Monographs on Occupational Exposures to Chemical Agents
OSHASP: US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
ACGIH: US. ACGIH Threshold Limit Values

Reproductive Toxicity:

Not classified

Specific Target Organ Toxicity (single exposure):

Not classified

Specific Target Organ Toxicity (repeated exposure):

Not classified

Symptoms/Injuries after Inhalation:

Inhalation of this material may be corrosive to the respiratory system. Inhalation of low concentrations may cause sore throat, coughing, choking, difficulty in breathing, and symptoms of headache. Chronic exposure may lead to bronchial irritation with chronic cough.

Symptoms/Injuries after Eye Contact:

Causes eye irritation.

Symptoms/Injuries after Ingestion:

Prolonged exposure to elevated concentrations of this material may be corrosive to the digestive tract.

Conditions Aggravated By Exposure:

Respiratory Disorders; Dermatitis or other skin disorders

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in the Soil
No data available

Other Adverse Effects
No ecological information or effects are known at this time.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal requirements.

RCRA Information: This material, if discarded as produced, is not a RCRA "listed" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. It is the responsibility of the generator to fully characterize for toxicity and other RCRA parameters prior to disposal (40 CFR 261).

SECTION 14: TRANSPORTATION INFORMATION

UN No.:	Not a UN listed material
UN Proper Shipping Name:	Not Applicable
DOT No.:	Not a DOT controlled material (United States)
Hazard Class:	Not Applicable
Hazard Labels:	Not Applicable
Packaging Group:	Not Applicable
DOT Special Provisions:	Not Applicable
DOT Packaging Exceptions:	Not Applicable
DOT Packaging Non Bulk:	Not Applicable

DOT Packaging Bulk: Not Applicable

Additional Information

Emergency Response Guide (ERG): Not Applicable

Other Information: None

Transport by Sea

DOT Vessel Stowage Location: Not Applicable

MFAG-No.: Not Applicable

Transport by Air

DOT Quantity Limit – Passenger Aircraft: Not Applicable

DOT Quantity Limit – Cargo Only Aircraft: Not Applicable

SECTION 15: REGULATORY INFORMATION

U.S. Regulatory Information:

Stratospheric Ozone Depletion Statement:

This product neither contains nor is directly manufactured with any controlled ozone depleting substances, Class 1 and 11.

SARA Hazard Classes:

SARA Title III Section 313 Toxic Release reporting: This product is not listed or subject to the release reporting requirements of Section 313.

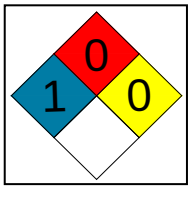
RCRA Information:

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. It is the responsibility of the generator to fully characterize for toxicity and other RCRA parameters prior to disposal (40 CFR 261).

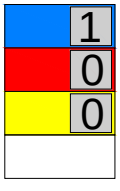
Canadian Regulatory Information:

Not controlled under WHMIS (Canada)

NFPA



WHMIS



SECTION 16: OTHER INFORMATION

This revision is written to bring previous MSDS into conformance with format and information requirements of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). As such this sheet is now identified as an SDS (Safety Data Sheet).

General Disclaimer:

The information provided in this SDS is correct to the best of our knowledge, information, and belief at the date of publication. The information given is designed as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered 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 material or in any process, unless specified in the text.

Commercial Disclaimer

SELLER MAKES NO WARRANTY. EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THERE OF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CHEM-MOD LLC.

S-SORB III

SAFETY DATA SHEET

Revision Date: 05/11/2015 Supersedes: 11/15/2012 Version 5

SECTION 1: IDENTIFICATION OF SUBSTANCE/MIXTURE AND COMPANY

Product Identifier

Product Form: Mixture

Product Name: S-Sorb III

CAS No. 7789-41-5

Chemical Family: A mineral composite of calcium aluminosilicate compounds and other calcium compounds containing iron, magnesium, and sulfur

Synonyms: Calcium Aluminosilicate, Cement Kiln Dust

Intended Use of Product

Coal additive for Mercury Emission Reduction

Name, Address, and Telephone Number of Responsible Party

Chem-Mod LLC
2 Pierce Place
20th Floor
Itasca, IL 44224
Telephone: 866-846-4789

Emergency Telephone Number:

1- 412-889-7718

SECTION 2: HAZARDS IDENTIFICATION

Classification of Substance (GHS-US)

Serious Eye Irritant, Category 2A
Skin Irritant, Category 2

Label Elements (GHS-US)

Hazard Pictogram(s)

Signal Word

Warning

Hazard Statements

H319 Causes serious eye irritation.
H315 Causes skin irritation.
H303 May be harmful if swallowed.
H333 May be harmful if inhaled.

Precautionary Statements

P280 Wear eye protection, long sleeves and pants, protective gloves.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P337+313 IF EYE IRRITATION PERSISTS: Seek medical advice/attention.
P302+352 IF ON SKIN: Wash thoroughly with soap and water.
P332+313 IF SKIN IRRITATION OCCURS: Seek medical advice/attention.
P264 Wash hands, forearms, and exposed areas thoroughly after handling.
P363 Wash contaminated clothing before reuse.
P301+330+331 IF SWALLOWED: Rinse mouth - Do NOT induce vomiting - Drink plenty of water.
P261 Avoid breathing dust
P284 In case of inadequate ventilation wear respiratory protection

Other Hazards

No additional information available.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	FORMULA	CAS No.	%	GHS-US Classification
Calcium carbonate	$CaCO_3$	1217-65-3	10 - 70	Eye Irritant, Category 2B
Calcium hydroxide	CaOH(2)	1305-62-0	3 – 10	Serious Eye Irritant, Category 2A Skin Irritant, Category 2
Calcium oxide	CaO	1305-78-8	2 – 10	Serious Eye Irritant, Category 2A Skin Irritant, Category 2
Aluminum oxide	Al_2O_3	1344-28-1	4 – 30	Eye Irritant, Category 2B
Iron oxide	Fe_2O_3	1309-37-1	1 – 5	Eye Irritant, Category 2B
Magnesium oxide	MgO	1309-48-4	0 – 2	Eye Irritant, Category 2B
Calcium sulfate	$CaSO_4$	7778-18-9	0 – 7	Eye Irritant, Category 2B Skin Irritant, Category 2
Nuisance dusts (various)		13397-24-5	< 1	Eye Irritant, Category 2B

SECTION 4: FIRST AID MEASURES

First Aid Measures

General:

Never give anything by mouth to an unconscious person.
If you feel unwell, seek medical advice.

Eye Contact:

Rinse thoroughly with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF irritation continues, seek immediate medical assistance.

Skin Contact:

Remove contaminated clothing. Wash thoroughly with soap and water. IF irritation occurs, seek medical assistance.

Ingestion:

Rinse mouth, do not induce vomiting. Drink plenty of water.

Inhalation:

When symptoms occur: go to open air and ventilate suspected area. Remove person to fresh air and rest in position for comfortable breathing. If you feel unwell, seek medical advice.

Symptoms (most important both acute and delayed)

After eye contact, may cause eye irritation

After skin contact, may cause irritation

After ingestion, may cause discomfort in

After inhalation, may cause irritation of upper respiratory tract.

Indication immediate medical attention and special treatment is needed

Discomfort or distress in affected individual

SECTION 5: FIRFIGHTING MEASURES

Extinguishing Media:

S-Sorb III is a nonflammable dry powder.

For fires involving materials surrounding or containing this product, all conventional media correct for the material involved are acceptable.

Special Hazards:

None

Special Protective Equipment / Precautions for Firefighters:

Firefighters should use SCBA in enclosed structures.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions / Protective Equipment:

Wear appropriate PPE, including:
- Safety glasses or goggles
- Long sleeves and pants
- Gloves

Ventilate area to clear dust.

Emergency Procedures:

Stop leak if possible and safe to do so.

For large spills, dike the area and collect the material for re-use or later disposal. Pick up material with shovels or other similar equipment.

Collect remaining / small spill amounts with the aid of vacuum. Place material into containers for later disposal. Move containers from spilled area.

Environmental Precautions:

S-Sorb III is not identified as a hazardous material.

Methods and Material for Containment and Disposal:

Use mechanical means such as shovels and power equipment to pick up material. Material should be recovered for re-use whenever possible. Use vacuums to greatest extent possible to recover spilled material into drums, tanks, or other containers.

Scrape up any wetted material and place in appropriate container. Allow material to “dry” before disposal. Do not attempt to wash S-Sorb III down drains.

Dispose of waste material in accordance with federal, state, and local requirements.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling:

Wear appropriate PPE, including:
- Safety glasses or goggles
- Long sleeves and pants
- Gloves

Avoid contact with skin or eyes.

Remove clothing that is contaminated with S-Sorb III. Launder clothing before reuse.

Supply trucks are offloaded by pressurizing tank truck to low pressure (max 14 psig [1 bar]). A leak during transfer may create a dust cloud. Avoid entering such clouds without respirator equipped with a NIOSH/MSHA approved dust cartridge.

Receiving silos or bins must be fitted with appropriate vent filter systems to control fugitive emission.

Conditions for Safe Storage:

Keep S-Sorb III dry. Normal temperatures and pressures do not affect the material. Material should be stored in silos or bins constructed from mild steel. Silos or bins must be kept closed to keep water out of the material.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters (Occupational Exposure Limits or Biological Limits)
S-Sorb III Not Evaluated (NE). Control parameters for major ingredients are listed below.

Calcium carbonate		
USA ACGIH	TLV (TWA, STEL, CEIL)	10mg/m^3(T), 20mg/m^3, NE
USA OSHA	PEL (TWA, STEL, CEIL)	15mg/m$^{3(}$T)-5mg/m^3 (R), NE, NE
Calcium hydroxide		
USA ACGIH	TLV (TWA, STEL, CEIL)	5mg/m^3(T), NE, NE
USA OSHA	PEL (TWA, STEL, CEIL)	5mg/m^3(T), NE, NE
Calcium oxide		
USA ACGIH	TLV (TWA, STEL, CEIL)	2mg/m^3(T), NE, NE
USA OSHA	PEL (TWA, STEL, CEIL)	5mg/m^3(T), NE, NE
Aluminum oxide		
USA ACGIH	TLV (TWA, STEL, CEIL)	10mg/m^3(T), NE , NE
USA OSHA	PEL (TWA, STEL, CEIL)	15mg/m$^{3(}$T)-5mg/m^3 (R), NE, NE
Iron oxide		
USA ACGIH	TLV (TWA, STEL, CEIL)	5mg/m^3(T), NE, NE
USA OSHA	PEL (TWA, STEL, CEIL)	5mg/m^3(T), NE, NE
Magnesium oxide		
USA ACGIH	TLV (TWA, STEL, CEIL)	10mg/m^3(T), NE, NE
USA OSHA	PEL (TWA, STEL, CEIL)	10mg/m^3(T), NE, NE

Control Parameters (cont.)

Calcium sulfate		
USA ACGIH	TLV (TWA, STEL, CEIL)	10mg/m^3(T), NE, NE
USA OSHA	PEL (TWA, STEL, CEIL)	10mg/m^3(T)-5mg/m^3(R), NE, NE
Nuisance dust (various)		
USA ACGIH	TLV (TWA, STEL, CEIL)	10mg/m^3(T), NE, NE
USA OSHA	PEL (TWA, STEL, CEIL)	10mg/m^3(T), NE, NE

Engineering Controls:

If fugitive release areas are enclosed, provide local exhaust ventilation for those areas. Where there is possibility of exposure, eyewash station should be provided close to the work area.

Individual Protection Measures

Eye/Face Protection: For normal operations, safety glasses with side shields are required. When performing operations on pressurized vessels (offloading delivery trucks) or when performing maintenance where significant dust generation is possible, wear unvented or indirectly vented goggles. In extremely dusty or unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with S-Sorb III.

Skin Protection: Prevention is essential to avoiding potentially severe skin injury. Avoid contact with wet S-Sorb III. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposures to S-Sorb III might occur, wear impervious clothing and gloves to prevent skin contact. Where required, wear sturdy boots that are impervious to water to eliminate foot and ankle exposure. Do not rely on barrier creams; barrier creams should not be used in place of impervious gloves and clothing.

Respiratory: A respirator is not indicated under normal handling. In conditions where user may be exposed to splashes or puffs of dust, wear a dust mask. In extremely dusty environments where dense dust clouds are likely, a respirator fitted with MSHA/NIOSH approved dust cartridge should be worn.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray to white powder.
Odor:	Normally odorless but may have faint “earth” odor
Odor threshold:	Not Available
pH (in water):	10 to 12.5
Melting/freezing point:	Not Applicable
Boiling point:	> 1000^{o}C

Flash point:	Not Applicable
Evaporation rate:	Not Available
Flammability:	Non-flammable
Flammability limits:	Not Applicable
Explosive limits:	Not Applicable
Vapor pressure:	Not Available
Vapor density:	Not Available
Relative density:	2.6 – 2.8 (water = 1.0)
Solubility:	2 – 20% (in water)
Partition coefficient:	Not Available
Auto-ignition temp:	Not Applicable
Decomposition temp:	> 1000^{o}C
Viscosity:	Varies with temperature

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Reacts with water to form calcium hydroxide producing a slight release in heat. Heat release is dependent upon the amount of calcium oxide present in the S-Sorb III. Dissolving S-Sorb III in hydrofluoric acid will produce silicon tetrafluoride gas which is corrosive. S-Sorb III is primarily a byproduct of production of Portland cement; as such it has weak cementitious properties. It will form a weak solid mass if the correct amount of water is added.
Chemical stability:	Stable under normal pressure and temperature
Possibility of Hazardous Reactions:	None known
Conditions to Avoid (Stability):	Avoid contact with incompatible materials
Incompatible Materials:	S-Sorb III is alkaline and is incompatible with acids, ammonium salts, and aluminum metal.
Hazardous Decomposition Products:	None known

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:

Not Available for S-Sorb III. Toxicity for major constituents is as follows:

Calcium carbonate	
LD50 Acute Oral Toxicity – rat	6,450 mg/kg
LD50 Acute Dermal Toxicity	Not available
LC50 Inhalation Toxicity	Not available
Calcium hydroxide	
LD50 Acute Oral Toxicity – mouse	7,300 mg/kg
LD50 Acute Dermal Toxicity	Not available
LC50 Inhalation Toxicity	Not available
Calcium oxide	
LD50 Acute Oral / Dermal Toxicity	Not available
LC50 Inhalation Toxicity	Not available
Aluminum oxide	
LD50 Acute Oral / Dermal Toxicity	Not available
LC50 Inhalation Toxicity	Not available
Iron oxide	
LD50 Acute Oral Toxicity – rat	4,068 mg/kg
LD50 Acute Dermal Toxicity – rabbit	2008 mg/kg
LC50 Inhalation Toxicity – rat	>203 mg/l
Magnesium oxide	
LD50 Acute Oral Toxicity – rat	4,068 mg/kg
LD50 Acute Dermal Toxicity – rabbit	2008 mg/kg
LC50 Inhalation Toxicity – rat	>203 mg/l
Calcium sulfate	
LD50 Acute Oral / Dermal	Not available
LC50 Inhalation Toxicity	Not available

Serious Eye Damage / Irritation:

Causes serious eye irritation.
Prolonged exposure to S-Sorb III dust is corrosive to the eyes and may cause burns or external ulcers. Prolonged contact may cause conjunctivitis.

Skin Corrosion / Irritation:

Causes slight skin irritation.
Prolonged exposure to wet S-Sorb III is corrosive to the skin. The extent of damage depends on duration of contact. Chronic dermatitis may follow repeated contact at elevated concentrations.

Respiratory or Skin Sensitization:

Not classified

Germ Cell Mutagenicity:

Not classified

Carcinogenicity:

No component of this product is present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by the following programs:

NTP: US. National Toxicology Program (NTP) Report on Carcinogens
IARC: US. IARC Monographs on Occupational Exposures to Chemical Agents
OSHASP: US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
ACGIH: US. ACGIH Threshold Limit Values

Crystalline Silica: S-Sorb III is a manufactured product which is made up of a mixture of calcium compounds which have been processed by calcining, therefore the silica contained in the mixture is contained in oxide compounds with other constituents. Some S-Sorb III is produced with mined minerals to supplement the processed minerals. This mined material may contain trace amounts of crystalline silica.

Reproductive Toxicity:

Not classified

Specific Target Organ Toxicity (single exposure):

Not classified

Specific Target Organ Toxicity (repeated exposure):

Not classified

Symptoms/Injuries after Inhalation:

Inhalation of this material may be corrosive to the respiratory system. Inhalation of low concentrations may cause sore throat, coughing, choking, difficulty in breathing, and symptoms of headache. Chronic exposure may lead to bronchial irritation with chronic cough.

Symptoms/Injuries after Eye Contact:

Causes eye irritation.

Symptoms/Injuries after Ingestion:

Prolonged exposure to elevated concentrations of this material may be corrosive to the digestive tract.

Conditions Aggravated By Exposure:
Respiratory Disorders; Dermatitis or other skin disorders

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in the Soil
No data available

Other Adverse Effects
No ecological information or effects are known at this time.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal requirements.

RCRA Information: This material, if discarded as produced, is not a RCRA "listed" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. It is the responsibility of the generator to fully characterize for toxicity and other RCRA parameters prior to disposal (40 CFR 261).

SECTION 14: TRANSPORTATION INFORMATION

UN No.:	Not a UN listed material
UN Proper Shipping Name:	Not Applicable
DOT No.:	Not a DOT controlled material (United States)
Hazard Class:	Not Applicable
Hazard Labels:	Not Applicable
Packaging Group:	Not Applicable
DOT Special Provisions:	Not Applicable

DOT Packaging Exceptions: Not Applicable

DOT Packaging Non Bulk: Not Applicable

DOT Packaging Bulk: Not Applicable

Additional Information

Emergency Response Guide (ERG): Not Applicable

Other Information: None

Transport by Sea

DOT Vessel Stowage Location: Not Applicable

MFAG-No.: Not Applicable

Transport by Air

DOT Quantity Limit – Passenger Aircraft: Not Applicable

DOT Quantity Limit – Cargo Only Aircraft: Not Applicable

SECTION 15: REGULATORY INFORMATION

U.S. Regulatory Information:

Stratospheric Ozone Depletion Statement:

This product neither contains nor is directly manufactured with any controlled ozone depleting substances, Class 1 and 11.

SARA Hazard Classes:

SARA Title III Section 313 Toxic Release reporting: This product is not listed or subject to the release reporting requirements of Section 313.

RCRA Information:

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. It is the responsibility of the generator to fully characterize for toxicity and other RCRA parameters prior to disposal (40 CFR 261).

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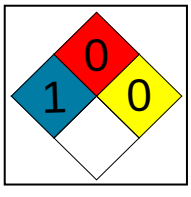
NFPA



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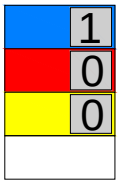

SECTION 16: OTHER INFORMATION

This revision is written to bring previous MSDS into conformance with format and information requirements of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). As such this sheet is now identified as an SDS (Safety Data Sheet).

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Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
RC UNIT 3600	Fugitive	Truck unload to MerSorb 6150 gal storage tank	2015	6150 gal	New	Full Enclosure
RC UNITS 3610,3620	Fugitive	MerSorb transfer pumps (2 hp each) from 6150 gal storage tank to 405 gal day storage tank.	2015	50 gal/min	New	Full Enclosure
RC UNIT 3630	Fugitive	MerSorb 405 gal day storage tank	2015	405 gal	New	Full Enclosure
RC UNITS 3650, 3655	Fugitive	MerSorb feed pumps (2 hp each) from day storage tank to existing conveyors C-5A/B for application to coal.	2015	25 gal/hr	New	Full Enclosure
RC UNIT 8200	1E	Truck unload to S-Sorb 218 ton storage silo	2015	218 ton	New	Bin Vent 8230
RC UNIT 8300	2E	Truck unload to S-Sorb 218 ton storage silo	2015	218 ton	New	Bin Vent 8330
RC UNITS 8100, 8210, 8310	Fugitive	S-Sorb transfer blower (200 hp) and rotary vane feeders (2hp each) for transfer from S-Sorb 218 ton storage silos to S-Sorb 25 ton day bin.	2015	1200 acfm 40 ton/hr	New	Full Enclosure
RC UNIT 3200	3E	S-Sorb 25 ton day bin	2015	25 ton	New	Bin Vent 3240
RC UNIT 3210	Fugitive	S-Sorb rotary vane feeder (2 hp) to screw conveyors.	2015	4 ton/hr	New	Full Enclosure
RC UNIT 3250	Fugitive	S-Sorb flop gate to screw conveyors	2015	4 ton/hr	New	Full Enclosure
RC UNIT 3220	Fugitive	Mitagent and S-Sorb screw conveyor (10 hp) to existing conveyor C-5A for application to coal.	2015	2,5 ton/hr	New	Full Enclosure
RC UNIT 3300	4E	Truck unload to Mitagent 50 ton feed silo	2015	50 ton	New	Bin Vent 3340
RC UNIT 3310	Fugitive	Mitagent rotary vane feeder (2 hp) to screw conveyor.	2015	1 ton/hr	New	Full Enclosure

RC UNIT 3350	Fugitive	Mitagent Flop Gate to screw conveyors.	2015	1 ton/hr	New	Full Enclosure
RC UNIT 3320	Fugitive	Mitagent and S-Sorb screw conveyor (10 hp) to existing conveyor C-5B for application to coal.	2015	2.5 ton/hr	New	Full Enclosure
RC UNIT 2010	Fugitive	Transfer Point A, Flop Gate between existing conveyors C-5A and C-6A.	2015	750 tons/hr	New	Full Enclosure
RC UNIT 2020	Fugitive	Transfer Point B, Flop Gate between existing conveyors C-5B and C-6B.	2015	750 tons/hr	New	Full Enclosure
RC UNIT 3100	Fugitive	Twin screw pug mill mixer in transfer tower between existing conveyors C-5A/B and C-6A/B.	2015	1500 tons/hr	New	Full Enclosure
RC UNIT 3110	Fugitive	Transfer Point C, Flop Gate between pug mill mixer outlet and existing conveyor C-6A.	2015	1500 tons/hr	New	Full Enclosure
RC UNIT 3110	Fugitive	Transfer Point D, Flop Gate between pug mill mixer outlet and existing conveyor C-6B.	2015	1500 tons/hr	New	Full Enclosure

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.
[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1E	Downward vent	UNIT 8200	S-Sorb 218 ton storage silo	Bin Vent 8230	Passive Bin Vent C&W Manufacturing LPR-8-S		299	PM/PM10	16	1.55	1.6E-3	1.55E-4	Gas/vapor	EE	2.5E-4 gr/ft^3
2E	Downward vent	UNIT 8300	S-Sorb 218 ton storage silo	Bin Vent 8330	Passive Bin Vent C&W Manufacturing LPR-8-S		299	PM/PM10	16	1.55	1.6E-3	1.55E-4	Gas/vapor	EE	2.5E-4 gr/ft^3
3E	Downward vent	UNIT 3200	S-Sorb 25 ton day bin	Bin Vent 3240	Passive Bin Vent MAC 39AVS C25		180	PM/PM10	25.7	2.97	2.1E-2	2.38E-3	Gas/vapor	EE	2.0E-3 gr/ft^3

4E	Downward vent	UNIT 3300	Mitagent 50 ton feed silo	Bin Vent 3340	Passive Bin Vent C&W Manufacturing LPR-8-S		96	PM/PM10	193	9.30	1.9E-2	9.30E-4	Gas/vapor	EE	3.0E-3 gr/ft^3

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

1 Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

2 Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

3 List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

4 Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

5 Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

6 Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

7 Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data

Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
1E	0.814	Ambient	750	24.04	634	95	4357.00	489.0
2E	0.814	Ambient	750	24.04	634	95	4357.00	489.0
3E	0.837	Ambient	1200	36.67	634	40	4357.00	489.0

4E	0.814	Ambient	750	24.04	634	36	4357.00	489.0

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? ☒ Yes ☐ No See attached Haul Road Emissions Estimates using latest version of AP-42 for paved roadway emissions. ☐ If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? ☐ Yes ☒ No ☐ If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? ☒ Yes ☐ No Liquid is non-volatile MerSorb (Calcium Bromide solution). ☐ If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? ☐ Yes ☒ No ☐ If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? ☒ Yes ☐ No See Attachment I, EMISSIONS UNITS TABLE for minor sources of fugitive emissions. ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS [1]	Maximum Potential Uncontrolled Emissions [2]		Maximum Potential Controlled Emissions [3]		Est. Method Used [4]
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions	PM	0.23	0.33	0.045	0.066	EE
Paved Haul Roads	PM10	0.045	0.066	0.009	0.013	EE
Unpaved Haul Roads	N/A					
Storage Pile Emissions	N/A					
Loading/Unloading Operations	N/A					
Wastewater Treatment Evaporation & Operations	N/A					
Equipment Leaks	N/A	Does not apply		Does not apply		
General Clean-up VOC Emissions	N/A					
Other	N/A					

[1] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. DO NOT LIST H_2, H_2O, N_2, O_2, and Noble Gases.

[2] Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[3] Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[4] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

Attachment L
Haul Road Fugitive Emissions Estimates

Fugitive Dust Emissions Estimates
Refined Coal System
Pleasants Power Station

Truck Traffic Summary

- 654 trucks maximum per year for sorbent application on coal at Conveyors C5A and C5B

UNIT 1 and 2	# of Trucks per year	
MerSorb	26	On-site One Way Travel:
S-Sorb	502	about 0.28 miles
Mitagent	126	
Total	**654**	

Assumes

3,200 gallons/truck (liquid MerSorb)
25 Tons/truck (solid S-Sorb and Mitagent)
Max. coal feed rate of 1500 TPH
Design Application rates of MerSorb (0.0120%), S-Sorb (0.2640%), and Mitagent (0.0660%)

Total Vehicle Miles Traveled:

Paved roadway from main gate to silo area: (0.28 miles) x (2 trips) x (654 trucks) = 366 miles
Total VMT = 366 miles

Emission Factor Calculations:

EPA AP-42 Chapter 13 for Paved Roads (Section 13.2.1.3)

$EF = k \times (sL)^{0.91} \times (W)^{1.02}$

Where: k = 0.011 lb/VMT (TSP)
k = 0.0022 lb/VMT (PM10)
sL = silt loading (municipal solid waste landfill) = 7.4 g/m^2
W = vehicle weight = 25 tons

EF(PM) = (0.011) x $(7.4)^{0.91}$ x $(25)^{1.02}$ = (0.011) x (6.18) x (26.66) = **1.81 lb/VMT**

EF(PM10) = (0.0022) x $(7.4)^{0.91}$ x $(25)^{1.02}$ = (0.0022) x (6.18) x (26.66) = **0.362 lb/VMT**

Emissions Estimate:

(Assume truck travel operations for 8 hrs/day, 365 days/yr for lb/hr estimates)

PM PTE = (1.81 lb/VMT) x (366 VMT) = 662.46 pounds = **0.33 ton/yr**
(0.33 tons) x (2000 lb/ton) / (2920 hr) = **0.23 lb/hr**

PM10 PTE = (0.362 lb/VMT) x (366 VMT) = 132.49 pounds = **0.066 ton/yr**
(0.066 tons) x (2000 lb/ton) / (2920 hr) = **0.045 lb/hr**

Assume control efficiency of 80% for water spray dust suppression on paved roadways.

PM PTE Controlled = 0.33 ton/yr x (1-0.80) = **0.066 ton/yr**
0.23 lb/hr x (1-0.80) = **0.046 lb/hr**

PM10 PTE Controlled = 0.066 ton/yr x (1-0.80) = **0.013 ton/yr**
0.045 lb/hr x (1-0.80) = **0.009 lb/hr**

Attachment M
Air Pollution Control Device Sheets

O Collectors

Round Silo Dust Collectors

GENERATION 2.0

General Information

STEEL

C&W's "O Collectors" (Round Silo Dust Collectors) offer you Pulse-Jet technology and our cartridge filters to provide an efficient yet inexpensive solution for dust control. These collectors are compact and user-friendly with a low-profile and POP in-out filter media exchange, with no tools or need to remove blow pipes. They can also expand to higher capacities without having to replace the units.

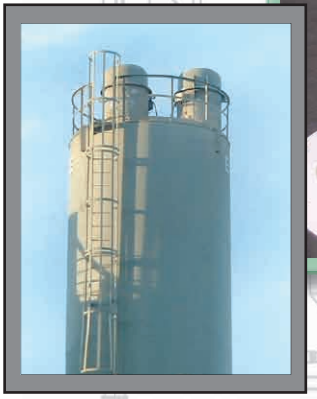
Options

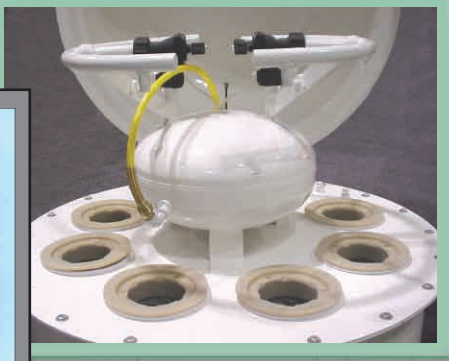
- Automatic On/Off Flow Switch
- Minihelic Gauge
- Special Adaptable Mounting Flange
- Air Tank Auto-Drain
- Silo Anti-Overfill System
- Pressure Relief Valves and Bin Indicators

Specs

Specifications	LPR-4-S	LPR-6-S	LPR-8-S
Total Filtration Area (sq. ft.)	178	267	356
Number of Cartridges	4	6	8
Cartridge Size	8" x 39"	8" x 39"	8" x 39"
Overall Height - **Steel***	72"	72"	72"
Flange Diameter	44" o.d.	44" o.d.	44" o.d.
Approx. Weight (lbs.) - Steel *	670	695	720
Compressed Air Required	3	3	3
CFM Recommended**	1,170	1,760	2,340
Min. Design Efficiency***	99.99%	99.99%	99.99%
Cleaning Mechanism	Pulse Jet	Pulse Jet	Pulse Jet

*Includes Mounting Flange change CFM recommended
** CFM shown for typical application. Unique application may
***Using Standard Test Conditions





C&W Manufacturing and Sales Co.
1-800-880-DUST
www.cwmfg.com

C&W Environmental Solutions

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C&W Manufacturing & Sales Co.
P.O. Box 908 • Crowley, TX 76036
817.783.5000 tel • 817.783.2353 fax info@cwmfg.com • www.cwmfg.com

Air Permit Work Sheet for C&W Dust Collector

Dust Collector Model No.	CP-LPR-8-S			
Type of Collector	SILO			
Cleaning Mechanism	pulse jet w/ adjustable timer			
Fan Included	n			
Fan Power	na	hp		
Collector Flow Rate-max rating	2,340	acfm		
Filter Material	Spun Bond polyester			
Filter Efficiency	99.99			
Filter Media Max Pressure Drop	12	in h2o		
Total Area of Filter Media	356	sqft		
Nominal Filter Diameter	8	in		
Nominal Filter Length	3.25	ft		
Quantity of Filters	8			
Number of Compartments	1			
Number of Filters per Compartment	8			
Filtering Velocity	2.11	acfm/ft2 of cloth		
Application Flow Rate	750	acfm		
Type of Particulate Controlled	IRON OXIDE POWDER			
Name of Source(s) or Equipment being Controlled	SILO			
	inlet		outlet	
Particulate Grain Loading	3.00E+01	grains/scf	3.00E-03	grains/scf
Outlet Area	0.52	ft2		
Outlet Velocity	24.04	ft/s		

C&W Manufacturing & Sales Co.
P.O. Box 908 • Crowley, TX 76036
817.783.5000 tel • 817.783.2353 fax info@cwmfg.com • www.cwmfg.com

Air Permit Work Sheet for C&W Dust Collector

Dust Collector Model No.	CP-LPR-8-S			
Type of Collector	SILO			
Cleaning Mechanism	pulse jet w/ adjustable timer			
Fan Included	n			
Fan Power	na	hp		
Collector Flow Rate-max rating	2,340	acfm		
Filter Material	Spun Bond polyester			
Filter Efficiency	99.99			
Filter Media Max Pressure Drop	12	in h2o		
Total Area of Filter Media	356	sqft		
Nominal Filter Diameter	8	in		
Nominal Filter Length	3.25	ft		
Quantity of Filters	8			
Number of Compartments	1			
Number of Filters per Compartment	8			
Filtering Velocity	2.11	acfm / ft2 of		
Application Flow Rate	750	acfm		
Type of Particulate Controlled	LIME &CEMENT KILN DUST			
Name of Source(s) or Equipment being Controlled	SILO			
	inlet		outlet	
Particulate Grain Loading	2.5E+00	grains / scf	2.50E-04	grains / scf
Outlet Area	0.52	ft2		
Outlet Velocity	24.04	ft / s		

MAC Equipment Inc.
P.O. Box 205 • Sabetha, KS 66534
888.821.2476 sales • 877.821.7378 service • www.macequipment.com

Air Permit Work Sheet for MAC AVSC Dust Collector

Dust Collector Model No.	39AVSC25			
Type of Collector	SILO			
Cleaning Mechanism	pulse jet w/ adjustable timer			
Fan Included	No			
Fan Power	n/a	hp		
Collector Flow Rate-max rating	2,500	acfm		
Filter Material	Spun Bond polyester			
Filter Efficiency	99.92			
Filter Media Max Pressure Drop	8	in H_2O		
Total Area of Filter Media	900	sqft		
Nominal Filter Diameter	6	in		
Nominal Filter Length	3.25	ft		
Quantity of Filters	25			
Number of Compartments	1			
Number of Filters per Compartment	25			
Filtering Velocity	1.33	acfm / ft2 of		
Application Flow Rate	1200	acfm		
Type of Particulate Controlled	LIME &CEMENT KILN DUST			
Name of Source(s) or Equipment being Controlled	SILO			
	inlet		outlet	
Particulate Grain Loading	2.5E+00	grains / scf	2.00E-03	grains / scf
Outlet Area	0.55	ft2		
Outlet Velocity	36.67	ft / s		

EXAMPLE LEGAL ADVERTISEMENT

Publication of a proper Class I legal advertisement is a requirement of the application process. In the event the applicant's legal advertisement fails to follow the requirements of 45CSR 13 (45-13-8) or the requirements of Chapter 59, Article 3, of the West Virginia Code, the application will be considered incomplete and no further review of the application will occur.

The applicant, utilizing the format for the Class I legal advertisement appearing below, shall cause such legal advertisement to appear a minimum of one (1) day in the newspaper most commonly read in the area where the facility exists or will be constructed. The notice must be published no earlier than five (5) working days of receipt by this office of your application. The original affidavit of publication must be received by this office no later than the last day of the public comment period.

The advertisement shall contain, at a minimum, the name of the applicant, the type and location of the source, the type and amount of air pollutants that will be discharged, the nature of the permit being sought, the proposed start-up date for the source and a contact telephone number for more information.

The location of the source should be as specific as possible starting with: 1.) the street address of the source; 2.) the nearest street or road; 3.) the nearest town or unincorporated area, 4.) the county, and 5.) latitude and longitude coordinates.

Types and amounts of pollutants discharged must include all regulated pollutants (PM, PM_{10}, VOC, SO_2, Xylene, etc.) and their potential to emit or the permit level being sought in units of tons per year (including fugitive emissions).

In the event the 30th day is a Saturday, Sunday, or legal holiday, the comment period will be extended until 5:00 p.m. on the following regularly scheduled business day.

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Allegheny Energy Supply Company LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for an NSR Class II Administrative Update and Title V Administrative Amendment for a Refined Coal System for pollution control located at Pleasants Power Station on #1 Power Station Boulevard in Willow Island, Pleasants County, West Virginia. The latitude and longitude coordinates are: UTM Northing (KM): 4357.00, UTM Easting (KM): 489.0, UTM Zone: 17

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: PM 0.07 ton/yr, PM10 0.017 ton/yr.

Startup of operation is planned to begin on or about the 16th day of November, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.
Dated this the **22nd** day of **June**, **2015**.

By: Allegheny Energy Supply Company LLC
Mark J. Valach
Director, Pleasants Plant
#1 Power Station Boulevard
Willow Island, WV 26134-9714

Attachment S

Title V Permit Revision Information

1. New Applicable Requirements Summary

Mark all applicable requirements associated with the changes involved with this permit revision:

☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS (Subpart(s)_____)	☐ Section 112(d) MACT standards (Subpart(s)_____)
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64) (1)
☐ NO_x Budget Trading Program Non-EGUs (45CSR1)	☐ NO_x Budget Trading Program EGUs (45CSR26)

(1) If this box is checked, please include **Compliance Assurance Monitoring (CAM) Form(s)** for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why **Compliance Assurance Monitoring** is not applicable:

2. Non Applicability Determinations

List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.

N/A

☒ **Permit Shield Requested** *(not applicable to Minor Modifications)*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision? ☐ Yes ☒ No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

The Title V language will be determined after the terms and conditions for the Reg 13 Class II Administrative Update are determined.

4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
Title V R30-R30-07300005-2013	10/17/2013	
R13-3082	09/09/2013	
	/ /	

5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
	MM/DD/YYYY	
	/ /	
	/ /	

6. Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY
PM	+0.007 TPY
PM10	+0.017 TPY

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.	

7. Certification For Use Of Minor Modification Procedures *(Required Only for Minor Modification Requests)*

Note:	*This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:*

i. Proposed changes do not violate any applicable requirement;

ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;

iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;

iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;

v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;

vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed):	_____ *(Please use blue ink)*	Date:	____ / ____ / ____ *(Please use blue ink)*
Named (typed):		Title:	

Note: Please check if the following included (if applicable):

☐	Compliance Assurance Monitoring Form(s)
☐	Suggested Title V Draft Permit Language

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.