West Virginia Department of Environmental Protection
Division of Air Quality

Jim Justice
Governor

Austin Caperton
Cabinet Secretary

Permit to Operate

Pursuant to

Title V

of the Clean Air Act

Issued to:

Second Sterling Corporation
Keystone Number 1 Coal Preparation Plant
R30-04700008-2017

William F. Durham
Director

Issued: August 22, 2017 • Effective: September 5, 2017
Expiration: August 22, 2022 • Renewal Application Due: February 22, 2022

Permit Number: **R30-04700008-2017**
Permittee: **Second Sterling Corporation**
Facility Name: **Keystone Number 1 Coal Preparation Plant**
Permittee Mailing Address: **P. O. Box 1085, Beckley, WV 25802-1085**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Keystone, McDowell County, West Virginia
Facility Mailing Address:	P. O. Box 1085, Beckley, WV 25802-1085
Telephone Number:	(304) 252-8528
Type of Business Entity:	Corporation
Facility Description:	Coal Preparation with Thermal Dryer
SIC Codes:	Primary 1221; Secondary NA; Tertiary NA
UTM Coordinates:	460.38 km Easting • 4141.305 km Northing • Zone 17

Permit Writer: Beena Modi

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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APPENDIX A - 45CSR10 Monitoring Plan

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed or Modified	Design Capacity		Control Device[1]
				TPH	TPY x 10^6	
HAULROADS						
*HR-A	60E	From mainline railroad tracks up Clark Branch to Y intersection. 1,400 ft of unpaved roads.	1950	N/A	N/A	WT
*HR-B	60E	From Y intersection to plant truck dump. 1,700 ft of unpaved roads.	1950	N/A	N/A	WT
*HR-C	60E	From County Rt.6 at Keystone No. 1 mine yard along old tram road to plant truck dump. 4,900 ft of unpaved roads.	1950	N/A	N/A	WT
*HR-D	60E	Haulroad Activity	1950	N/A	N/A	WT
*HR-E	61E	Haulroad Activity	2004	N/A	N/A	WT and DSA
*HR-F	61E	Haulroad Activity	2004	N/A	N/A	WT and DSA
*HR-G	65E	Refuse Trucking	2007	NA	NA	WT
*FE	60E	Front Endloader Activity	1950	N/A	N/A	WT
STORAGE						
ST1	40E	Raw Coal Open Stockpile (5,000 sq. ft/ 5,000 Ton)	1952	470	0.1	MC
ST2	41E	Raw Coal Storage Bins (2000 ton)	1952	450	3.942	PE
ST3	42E	Raw Coal Storage Bin 5 (500 Ton)	1952	450	3.942	PE
ST4	43E	Raw Coal Storage Bin 6 (500 Ton)	1952	450	3.942	PE
ST5	44E	Rail Loadout Bin - Clean Coal Storage Loadout Bin with Telescopic Chute (100 ton)	1977	290	2.001	PE
ST6	45E	Clean Storage Silo (1700 Ton)	1990	290	2.001	FE
ST7	46E	Clean Storage Silo (1700 Ton)	1990	290	2.001	FE
ST8	47E	Clean Storage Open Stockpile (52,605 sq. ft/ 100,000 Ton)	1984	290	1.000	DSA
ST11	50E	Truck Dump Hopper No. 1 (80 Ton)	1952	450	3.942	PE
ST12	51E	Truck Dump Hopper No. 2 (30 ton)	1952	450	3.942	PE
ST13	52E	House Coal Bin (2,000 Ton)	1952	40	0.333	PE
ST15	54E	Eckman Loadout Open Stockpile (348,480 ft^2/90,000 Ton)	2013	1000	1.0	WS
ST21	64E	Raw Coal Overflow Stockpile (1000 ft^2 1000 tons)	2007	N/A	1.000	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed or Modified	Design Capacity		Control Device[1]
				TPH	TPY x 10^6	
THERMAL DRYER / BREAKER / SCREENERS						
SZ01	35E	Bradford Breaker	1952	450	3.942	FE
SZ02	36E	Gundlach Screen	1952	200	1.752	PE
SZ04	38E	Two Pre-Wet Wash Plant Screens	2012	470	3.066	FE
TD05	#001, #002	Thermal Dryer3 Manufacturer: ENI Engineering Co. Model: Coal Flo # 7.5 Type: Fluidized Bed Dryer Coal Stoker Fired (2.5 TPH) Design BTU Rating: 65 x 10^6 Btu/hr	1977	Dry: 290.0 Wet: 318.7 2.50	Dry: 2.54 Wet: 2.199 0.022	FKFD and RCC
CONVEYOR BELTS						
C01	1E	36" Belt Conveyor from Truck Dump No.2 feeder to Screen SZ02	1952	200	1.752	PE
C02	2E	36" Belt Conveyor from Screen SZ02 to Belt Conveyor C03-Stacker Conveyor	1952	200	1.752	PE
C03	3E	36" Belt Conveyor-Stacker Conveyor from T18 to Raw Coal Stockpile, ST1	1952	470	0.100	PE
C04	4E	36" Belt Conveyor from Truck Dump No.1 feeder to Bradford Breaker	1952	450	3.942	FE
C05	5E	48" Belt Conveyor-Tripper Belt from Bradford Breaker to C03-Stacker Conveyor, C06-Tripper Belt, and C07 -Tripper Belt	1952	450	3.942	PE
C06	6E	48" Belt Conveyor-Tripper Belt-from C05-Tripper Belt-to raw coal belt to Blending Bins ST2	1952	450	3.942	PE
C07	7E	48" Belt Conveyor -Tripper Belt- from -Tripper Belt-C05 to raw coal belt to Bins ST3&ST4	1952	450	3.942	PE
C08	8E	36" Belt Conveyor from Raw Coal Stockpile ST1 to C09	2012	470	0.1	PE
C09	9E	42" Belt Conveyor from Blending Bins ST2 to C10	2012	470	3.066	PE
C10	10E	48" Belt Conveyor from C09-ST2 and collects from Bins 5&6 and carries to Pre-Wet Screens (SZ04)	2012	470	3.066	MC
C11	11E	30" Belt Conveyor from Thermal Dryer to Loadout Bin (ST5) 100T Bin	1952	290	2.001	PE
C12	12E	36" Belt Conveyor-Clean Coal Silo Transfer Belt-from Storage Bin 5 to Storage Bins 6&7-Clean Coal Silos	1990	290	2.001	PE

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed or Modified	Design Capacity		Control Device[1]
				TPH	TPY x 10^6	
C13	13E	36" Belt Conveyor Transfer Belt to Clean Coal Silo - ST6 & ST7	1990	290	2.001	PE
C14	14E	36" Belt Conveyor-Reclaim Belt-from Clean Coal Storage Silo ST6 to C15-Loadout Belt	1990	290	2.001	PE
C15	15E	36" Belt Conveyor -Reclaim Belt-from Clean Coal Storage Silo ST7 to C15-Loadout Belt	1990	290	2.001	PE
C16	16E	36" Belt Conveyor -Loadout Belt- to Drop Chute	1990	290	2.001	PE
C21	21E	CC Conveyor Belt	1997	318.7	2.199	PE
C22	22E	CC Conveyor Belt	1997	40	0.3504	PE
C23	23E	CC Conveyor Belt	1997	40	0.3504	PE
C24	24E	CC Conveyor Belt	1997	40	0.3504	PE
C25	25E	CC Conveyor Belt	1997	40	0.017	PE
REFUSE						
SZ03	37E	McLanahan Crusher	1952	200	1.752	PE
ST9	48E	Stand-By Refuse Bin (300 Ton)	1952	200	1.752	PE
ST10	49E	Refuse Bin (500 Ton)	1952	200	1.752	PE
ST14	53E	Refuse Bin (50 Ton)		400	1.752	PE
C17	17E	Refuse 36" Belt Conveyor	1952	200	1.752	MC
C18	18E	Refuse 36" Belt Conveyor	1952	75	0.657	MC
C19	19E	Refuse 48" Belt Conveyor	1952	200	1.752	PE
C20	20E	Refuse 36" Belt Conveyor	2010	400	1.752	PE
		Arial Tram		400	1.752	None
C26	26E	Refuse Conveyor Belt	2010	300	1.752	MC
C27	27E	Refuse Conveyor Belt	1997	400	1.752	None
C28	28E	Refuse Conveyor Belt	1997	400	1.752	None
C29	29E	Refuse Conveyor Belt	1997	400	1.752	None
C30	30E	Refuse Conveyor Belt	1997	400	1.752	None
C31	31E	Refuse Conveyor Belt	1997	400	1.752	None
C35	63E	Conveyor Belt	2007	400	0.750	None
LIME FACILITY						
ST20	59E	Lime Feed Bin (0.35 Ton)	2004	0.025	0.000175	FE
FSC1	62E	Lime Screw Conveyor	2004	0.025	0.000175	FE

(1) Transfer points (TP) have the same type of fugitive dust control system as the associated conveyors unless otherwise noted. Control Device abbreviations: FE = Full Enclosure, FE/FE = Full Enclosure in Building, PE = Partial Enclosure, NE = No Enclosure, IMC = Inherent Moisture Content (6%) of the coal from the mine, MC = Moisture Content, WT = Water Truck, DSA = Dust Suppression Additives, FKFD = Flex-Kleen Flooded Disk wet scrubber (Manufacturer: Research-Cottrell, Model: Flex-Kleen Flooded Cone, Type: Venturi #60), and RCC = Two (2)-82" equivalent diameter Research-Cottrell Cyclones (Manufacturer: Research-Cottrell, Model: Flex-Kleen Dryer Mechanical Cyclone Dust Collectors and Flex-Kleen #14 Tangentially Fed Cyclonic type mist eliminator)

***Note** – These sources are collectively included in Emission Unit/Source ID "VT" in Table 1.0. of permit R13-0308.

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-0308F	03/13/2013

2.0 General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
m	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
mm	Million	**VOC**	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3/hr$ *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA *or* N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c. **[45CSR§30-5.1.b.]**

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration. **[45CSR§30-4.1.a.3.]**

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3. **[45CSR§30-6.3.b.]**

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time. **[45CSR§30-6.3.c.]**

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. **[45CSR§30-5.1.f.3.]**

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
[45CSR§30-5.7.a.]

2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.
[45CSR§30-5.7.b.]

2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof. **[45CSR§30-5.6.a.]**

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding. **[45CSR§30-5.3.e.3.B. and 45CSR38]**

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect. **[45CSR§30-5.1.e.]**

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege. **[45CSR§30-5.1.f.4]**

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.9. No person shall cause, suffer, allow or permit a coal preparation plant or handling operation to operate that is not equipped with a fugitive dust control system. This system shall be operated and maintained in such a manner as to minimize the emission of particulate matter into the open air.
[45CSR§5-6.1., 45CSR13, R13-0308, §4.1.6.c.]

3.1.10. The owner or operator of a coal preparation plant or handling operation shall maintain dust control of the premises and owned, leased or controlled access roads by paving, or other suitable measures. Good operating practices shall be observed in relation to stockpiling, car loading, breaking, screening and general maintenance to minimize dust generation and atmospheric entrainment.
[45CSR§5-6.2., 45CSR13, R13-0308, §4.1.6.d.]

3.1.11. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR13, R13-0308, §4.1.10.]

3.2. Monitoring Requirements

3.2.1. The permittee shall inspect all fugitive dust control systems monthly to ensure that they are operated and maintained in conformance with their designs. The permittee shall maintain records of all scheduled and non-scheduled maintenance. Records shall be maintained on site stating any maintenance or corrective actions taken as a result of the monthly inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken.
[45CSR§30-5.1.c.]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted

in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

   1. The permit or rule evaluated, with the citation number and language.

   2. The result of the test for each permit or rule condition.

   3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.,45CSR13, R13-0308, §4.4.1.]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.4.4. The permittee shall maintain daily records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility. These records shall be maintained on site for a period of no less than five (5) years.
[45CSR§30-5.1.c.]

3.4.5. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13, R13-0308, §4.4.2.]

3.4.6. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-0308, §4.4.3.]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance (3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. **[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:
DEPAirQualityReports@wv.gov

US EPA:
R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary. **[45CSR§30-5.1.c.3.B.]**

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement. **[45CSR§30-4.3.h.1.B.]**

3.6. Compliance Plan

3.6.1. None

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

45CSR§10-5.	The thermal dryer is not defined as a refinery process gas stream or any other process gas stream that contains hydrogen sulfides to be combusted.

4.0 Thermal Dryer [emission point ID(s): #001 and #002]

4.1. Limitations and Standards

4.1.1. The sulfur content of the coal being used to fire the thermal dryer shall not exceed 0.85% on an as received basis.
[45CSR13, R13-0308, 4.1.2.b.]

4.1.2. The ash content of the coal being used to fire the thermal dryer shall not exceed 10% on an as received basis.
[45CSR13, R13-0308, 4.1.2.c.]

4.1.3. Maximum hourly and annual emissions from the operation of the thermal dryer shall not exceed the limits as specified in the following table:

Thermal Dryer Emission Limits

Pollutant	Hourly (lbs/hr)	Annual (tons/year)
CO	12.60	43.50
NOx	40.60	140.10
$PM_{2.5}$	7.23	24.90
PM_{10}	7.23	24.90
PM	7.23	24.90
SO_2	12.80	44.10
VOC	30.00	103.50

[45CSR13, R13-0308, 4.1.2.a.]

4.1.4. Coal dried in the thermal dryer shall not exceed 318.7 tons per hour or 2,199,030 tons per year.
[45CSR13, R13-0308, 4.1.2.d.]

4.1.5. Operation of the thermal dryer shall not exceed 6,900 hours per year.
[45CSR13, R13-0308, 4.1.2.e.]

4.1.6. Emissions from the thermal dryer shall be controlled by a cyclone and a venturi scrubber. The rate of hydrated lime injected into the SO_2 control system shall be sufficient so as to maintain the scrubber influent at a pH of at least 5.0.
[45CSR13, R13-0308, 4.1.2.f.]

4.1.7. On and after the date on which the performance test is conducted or required to be conducted under 40 C.F.R. §60.8 whichever date comes first, an owner or operator of a thermal dryer constructed, reconstructed, or modified on or before April 28, 2008, subject to the provisions of 40 C.F.R. Part 60 Subpart Y must meet the requirements in paragraphs (a)(1) and (a)(2) of this section (i.e., §60.252(a)):

a. The owner or operator shall not cause to be discharged into the atmosphere from the thermal dryer any gases which contain PM in excess of 0.070 g/dscm (0.031 grains per dry standard cubic feet (gr/dscf)); (*Compliance with this streamlined particulate matter limit assures compliance with the particulate matter limits of Section 4.1.3.*) and

b. The owner or operator shall not cause to be discharged into the atmosphere from the thermal dryer any gases which exhibit 20 percent opacity or greater. (*Compliance with this streamlined visible emissions limit assures compliance with 45CSR§5-3.1.).*

[45CSR16, 40 C.F.R. §60.252(a), 45CSR13, R13-0308, 4.1.7. & 4.1.6.a., 45CSR§5-3.1.]

4.1.8. No person shall circumvent 45CSR5 by adding additional gas to any dryer exhaust or group of dryer exhausts for the purpose of reducing the grain loading.
[45CSR§5-4.2. 45CSR13, R13-0308, 4.1.6.]

4.1.9. No person shall cause, suffer, allow or permit the exhaust gases from a thermal dryer to be vented into the open air at an altitude of less than eighty (80) feet above the foundation grade of the structure containing the dryer or less than ten (10) feet above the top of said structure or any adjacent structure, whichever is greater. In determining the desirable height of a plant stack, due consideration shall be given to the local topography, meteorology, the location of nearby dwellings and public roads, the stack emission rate and good engineering practice as set forth in 45CSR20.
[45CSR§5-4.3., 45CSR13, R13-0308, 4.1.6.]

4.1.10. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in 45CSR§§10-4.1.a through 4.1.e.
[45CSR§10-4.1.]

4.2. Monitoring Requirements

4.2.1. The permittee shall conduct monitoring/recordkeeping/reporting for the thermal dryer as follows:

a. For the purpose of determining compliance with the opacity limits of 45CSR5 and 40 CFR 60 Subpart Y, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar week. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for four (4) consecutive weekly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check.

A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

b. A record of each visible emissions observation shall be maintained, including any data required by 40 C.F.R. 60 Appendix A, Method 22 or Method 9, whichever is appropriate. The record shall include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records shall be maintained on site for a period of no less than five (5) years stating any maintenance or corrective actions taken as a result of the daily inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken.

[45CSR§30-5.1.c., 40CSR16, 40 C.F.R. §60.257(a)(1), 45CSR13, R13-0308, 4.2.4.]

4.2.2. At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of 45CSR10. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of 45CSR10.
[45CSR§10-8.2.a.]

4.2.3. Prior to the installation of calibrated stack gas monitoring devices, sulfur dioxide emission rates shall be calculated on an equivalent fuel sulfur content basis.
[45CSR§10-8.2.b.]

4.2.4. The permittee shall follow the monitoring plan pursuant to 45CSR§10-8.2.c. See Appendix A.
[45CSR§10-8.2.c.2.]

4.2.5. The owner or operator of any thermal dryer shall install, calibrate, maintain, and continuously operate monitoring devices as follows:

a. A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within ±1.7 °C (±3 °F).

b. For affected facilities that use wet scrubber emission control equipment:

1. A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±1 inch water gauge.

2. A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±5 percent of design water supply pressure. The pressure sensor or tap must be located close to the water discharge point. The Administrator may be consulted for approval of alternative locations.

[45CSR16, 40 C.F.R. §60.256(a)(1), 45CSR13, R13-0308, 4.2.5.(1)]

4.2.6. All monitoring devices under 40 C.F.R. §60.256(a) [Section 4.2.5.] are to be recalibrated annually in accordance with procedures under 40 C.F.R. §60.13(b).
[45CSR16, 40 C.F.R. §60.256(a)(2), 45CSR13, R13-0308, 4.2.5.(2)]

4.2.7. For the purposes of demonstrating continuous compliance with maximum throughput limitations set forth in 4.1.4. the permittee shall monitor and record the monthly and rolling twelve month throughput.
[45CSR13, R13-0308, 4.2.1.]

4.2.8. For the purposes of demonstrating continuous compliance with maximum hours of operation limit set forth in 4.1.5. the permittee shall monitor and record the monthly and rolling twelve month hours of operation of the thermal dryer.
[45CSR13, R13-0308, 4.2.2.]

4.2.9. The permittee shall meet all applicable monitoring, compliance demonstration, and record-keeping requirements as given under 45CSR5, 45CSR7, and 40 CFR 60, Subpart Y.
[45CSR13, R13-0308, 4.2.6.]

Compliance Assurance Monitoring (CAM) requirements for the Cyclone and the Wet Scrubber

4.2.10. **Proper Maintenance** – At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
[40 C.F.R. § 64.7(b); 45CSR§30-5.1.c.]

4.2.11. **Continued Operation** – Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of 40 C.F.R. Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
[40 C.F.R. § 64.7(c); 45CSR§30-5.1.c.]

4.2.12. **Excursion**

a. Cyclone - The permittee shall follow the cyclone's manufacturer requirements to maintain a pressure drop range from 4.0 to 7.0 inches H_2O. An excursion shall be defined as a pressure drop of less than 4.0 or greater than 7.0 inches H2O.
[40 C.F.R. § 64.6(c)(2); 45CSR§30-5.1.c.]

b. Scrubber - The scrubber effluent pH is continuously recorded. The lime feed rate shall be set to maintain sufficient speed for the scrubber effluent pH set point of 5.0 in order to consistently meet a minimum effluent pH of 4.0. An excursion is defined when the scrubber effluent pH is less than 4.0.
[40 C.F.R. § 64.6(c)(2); 45CSR§30-5.1.c.]

4.2.13. **Response to Excursion**

a. Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

b. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

[40 C.F.R. § 64.7(d); 45CSR§30-5.1.c.]

4.2.14. **Documentation of Need for Improved Monitoring** – If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Director and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
[40 C.F.R. § 64.7(e); 45CSR§30-5.1.c.]

4.3. Testing Requirements

4.3.1. Any stack venting thermal dryer exhaust gases and/or air table exhaust gases or exhaust gases or air from any air pollution control device shall include straight runs of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures. Flow straightening devices shall be required where cyclonic gas flow would exist in the absence of such devices
[45CSR§5-12.6.]

4.3.2. The permittee shall conduct tests to determine compliance with the particulate matter (PM) emission limitations in Section 4.1.7.(a) in accordance with the frequency established in the following table and the results of the most recent tests already conducted. As outlined in 40 C.F.R. §60.257(b)(5), the permittee shall use Method 5 or an alternative method approved by the Director for such testing. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin. A minimum of three valid test runs are needed to comprise a PM performance test.

If an alternative testing method were approved which effectively replaces Method 5, a permit revision would be required in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable. Parameter indicator ranges shall be established for the exit temperature of the thermal dryer, water pressure to the control equipment, and the pressure loss of the inlet airflow to the scrubber. The permittee shall establish these indicator ranges and operate within these ranges to provide a reasonable assurance that the thermal dryer unit is in compliance with opacity and particulate loading limits. The permittee shall take immediate corrective action when a parameter falls outside the indicator range established for that parameter and shall record the cause and corrective measures taken.

The permittee shall conduct a stack test, establish parameter indicator ranges, and furnish the Director a written report of the results of such testing and established indicator ranges. The permittee shall also record the following parameters during such testing:

a. Opacity readings on the exhaust stack following the procedures of Method 9;

b. Amount of coal burned and the amount of coal dried;

c. Coal drying temperature and residence time in the dryer;

d. Temperature of the gas stream at the exit of the thermal dryer;

e. Flow rate through the dryer and converted to dry standard cubic feet;

f. Water pressure to the control equipment; and

g. Pressure loss of the inlet airflow to the scrubber. The pressure drop will be measured between the inlet airflow to the scrubber and outlet airflow of the scrubber, which is atmospheric loss through the venturi constriction of the control equipment.

Testing Frequency Table

Test	Test Results	Testing Frequency
Annual	If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90 % of particulate loading limit	Once/3 years
Annual	If annual testing is required, after three successive tests indicate mass emission rates ≤50% of particulate loading limit	Once/5 years
Once/3 years	If testing is required once/3 years, after two successive tests indicate mass emission rates 50% of particulate loading limit	Once/5 years
Once/3 years	If testing is required once/3 years and any test indicates a mass emission rate ≥90% of particulate loading limit	Annual
Once/5 years	If testing is required once /5 years and any test indicates mass emission rates between 50% and 90 % of particulate loading limit	Once/3 years
Once/5 years	If testing is required once/5 years and any test indicates a mass emission rate ≥90% of particulate loading limit	Annual

[45CSR§30-5.1.c., 45CSR16, 40 C.F.R. §60.257(b)(5), 45CSR13, R13-0308, 4.3.2. & 4.3.9. 45CSR§5-12.1.]

4.3.3. At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of 45CSR§§10-3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 CFR Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices.
[45CSR§10-8.1.a.]

4.3.4. The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions other than those noted in 45CSR§10-3.
[45CSR§10-8.1.b.]

4.3.5. **Subpart Y - Performance Tests and Other Compliance Requirements.** An owner or operator of each affected facility that commenced construction, reconstruction, or modification on or before April 28, 2008, must conduct all performance tests required by §60.8 to demonstrate compliance with the applicable emission standards using the methods identified in §60.257.
[45CSR16, 40CFR§60.255(a), 45CSR13, R13-0308, 4.3.2.]

4.3.6. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in the permit application (i.e., R13-0308 application) and/or applicable regulations.
[45CSR13, R13-0308, 4.3.1.]

4.3.7. *Reserved*

4.3.8. Tests that may be required by the Director to determine compliance with the CO, NO_x, and VOC emission limitations set forth in Sections 4.1.3 shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at maximum achievable load unless otherwise specified by the Director.

a. Tests to determine compliance with CO emission limits shall be conducted in accordance with Method 10 or 10B as set forth in 40 C.F.R. 60, Appendix A.

b. Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7, 7A, 7B, 7C, 7D, or 7E as set forth in 40 C.F.R. 60, Appendix A.

c. Tests to determine compliance with VOC emission limits shall be conducted in accordance with Method 25, or 25A as set forth in 40 C.F.R. 60, Appendix A.

[45CSR§30-5.1.c.]

4.3.9. The permittee shall meet all applicable testing requirements as given under 45CSR5 and 40 CFR 60, Subpart Y.
[45CSR13, R13-0308, 4.3.10.]

4.4. Recordkeeping Requirements

4.4.1. The permittee shall demonstrate compliance with Section 4.1.10 [45CSR§10-4.1.] by complying with the stipulations as stated below:

a. The owner or operator of a thermal dryer shall meet the following minimum coal sampling requirements:

1. The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the dryer may be obtained.

2. Coal shall be sampled at least three (3) times per day and at least once per eight (8) hour period.

3. Minimum sample size shall be five hundred (500) grams.

4. Samples shall be composited and analyzed at the end of each calendar month

b. Coal samples shall be prepared for analysis in accordance with procedures specified in ASTM D2013-86. "Standard Method of Preparing Coal Samples for Analysis."

c. The heat content of coal samples shall be determined in accordance with procedures specified in ASTM D2015-85, "Standard Test Method for Gross Calorific Value of Solid fuel by the Adiabatic Bomb Calorimeter," or ASTM D5865, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter."

d. The sulfur content of coal samples shall be determined in accordance with procedures specified in ASTM D3177-84, "Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke", or ASTM D4239-85, "Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods."

e. The owner or operator of a thermal dryer shall calculate the SO_2 emissions for each month based on the design heat input of 105 mmBtu/hr and the results of the analyses for sulfur and heat content for the month according to the following equations:

Equation 1:

$$SO_2 \text{ (LB/hr)} = 2 \times (MFR / HV) \times S$$

Where: MFR = Design heat input of 105,000,000 Btu/hr
HV = Heating value of fuel in Btu/LB
S = Percent sulfur content of fuel divided by 100
2 = 2 LB SO_2 per 1LB S

Equation 2:

$$SO_2 \text{ (ppmv)} = SO_2 \text{ (LB/hr)} \times (385/64) \times (1/89{,}000) \times (1/60) \times 10^6$$

Where: SO_2 (ppmv) = Sulfur dioxide concentration by volume
SO_2 (LB/hr) = Sulfur dioxide weight rate
385 = Molar volume in scf/LB-mole
64 = Molecular weight of Sulfur dioxide in LB/LB-mole
89,000 = Exhaust fan volumetric exhaust flow rate in scfm
60 = Minutes per hour

The measurement of fuel flow on this particular thermal dryer is not easily accomplished. Therefore by using the equations in this section, the maximum design heat input, and minimum volumetric gas flow rate, if compliance with 45CSR§10-4.1 is shown with these "worse case" conditions then compliance at lower heat inputs and/or higher stack gas flow rates will be ensured.

f. These records shall be maintained on site for a period of no less than five (5) years.

[45CSR§30-5.1.c.]

4.4.2. Recordkeeping of the scrubber effluent pH, the pressure drop across the cyclone and for the monitoring devices in Section 4.2.5., shall be recorded at least once every 12 hours during periods of normal operation. These records shall be maintained on site for a period of no less than five (5) years.
[40 C.F.R. §64.3(b)(4)(iii), 45CSR§30-5.1.c.]

4.4.3. **General recordkeeping requirements for 40 C.F.R. Part 64 (CAM)** - The permittee shall comply with the recordkeeping requirements specified in permit conditions 3.4.1. and 3.4.2. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 C.F.R. Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Such records shall include at a minimum:

1. A record of the number, duration and cause(s) of all excursions or exceedances, and the corrective actions will be maintained.

2. A record of the number, duration, and cause for the downtime of the monitoring devices shall be kept. This excludes downtime for calibration checks. This document should also include the measures taken to correct the excursion.

3. The permittee shall maintain maintenance records on the cyclones.

[40 C.F.R. § 64.9(b); 45CSR§30-5.1.c.]

4.5. Reporting Requirements

4.5.1. See Section 3.5.

4.5.2. **General reporting requirements for 40 C.F.R. Part 64 (CAM)**

a. On and after the date specified in 40 C.F.R. §64.7(a) by which the permittee must use monitoring that meets the requirements of 40 C.F.R. 64, the permittee shall submit CAM monitoring reports with the

quarterly excess emissions reports. A copy of the CAM monitoring reports generated within the semi-annual monitoring report period shall be included with the semi-annual monitoring report under permit condition 3.5.6. Incorporation by reference within the semi-annual monitoring report is not acceptable.

b. A report for monitoring under 40 C.F.R. 64 shall include, at a minimum, the information required under permit condition 3.5.8. and the following information, as applicable:

1. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

2. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

3. A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. § 64.9(a); 45CSR§30-5.1.c.]

4. Compliance Plan

4.6.1. None

5.0 Refuse Storage [emission point ID(s): 48E, 49E, 53E]

5.1. Limitations and Standards

5.1.1. In order to prevent and control air pollution from coal refuse disposal areas, the operation of coal refuse disposal areas shall be conducted in accordance with the standards established by 45CSR§5-7.
[45CSR§5-7.1., 45CSR13, R13-0308, 4.1.6.]

5.1.2. Coal refuse is not to be deposited on any coal refuse disposal area unless the coal refuse is deposited in such a manner as to minimize the possibility of ignition of the coal refuse.
[45CSR§5-7.2., 45CSR13, R13-0308, 4.1.6.]

5.1.3. Coal refuse disposal areas shall not be so located with respect to mine openings, tipples or other mine buildings, unprotected coal outcrops or steam lines, that these external factors will contribute to the ignition of the coal refuse on such coal refuse disposal areas.
[45CSR§5-7.3., 45CSR13, R13-0308, 4.1.6.]

5.1.4. Vegetation and combustible materials shall not be left on the ground at the site where a coal refuse pile is to be established, unless it is rendered inert before coal refuse is deposited on such site.
[45CSR§5-7.4., 45CSR13, R13-0308, 4.1.6.]

5.1.5. Coal refuse shall not be dumped or deposited on a coal refuse pile known to be burning, except for the purpose of controlling the fire or where the additional coal refuse will not tend to ignite or where such dumping will not result in statutory air pollution.
[45CSR§5-7.5., 45CSR13, R13-0308, 4.1.6.]

5.1.6. Materials with low ignition points used in the production or preparation of coal, including, but not limited to, wood, brattice cloth, waste paper, rags, oil and grease, shall not be deposited on any coal refuse disposal area or in such proximity as will reasonably contribute to the ignition of a coal refuse disposal area.
[45CSR§5-7.6., 45CSR13, R13-0308, 4.1.6.]

5.1.7. Garbage, trash, household refuse and like materials shall not be deposited on or near any coal refuse disposal area.
[45CSR§5-7.7., 45CSR13, R13-0308, 4.1.6.]

5.1.8. The deliberate ignition of a coal refuse disposal area or the ignition of any materials on such an area by any person or persons is prohibited.
[45CSR§5-7.8., 45CSR13, R13-0308, 4.1.6.]

5.1.9. With respect to all burning coal refuse disposal areas, the person responsible for the coal refuse disposal areas or the land on which the coal refuse disposal areas are located shall use due diligence to control air pollution from the coal refuse disposal areas. Consistent with the declaration of policy and purpose set forth in W. Va. Code §22-5-1, the Director shall determine what constitutes due diligence with respect to each such burning coal refuse disposal area. When a study of any burning coal refuse disposal area by the Director establishes that air pollution exists or may be created, the person responsible for the coal refuse disposal area or the land on which the coal refuse disposal area is located shall submit to the Director a report setting forth satisfactory methods and procedures to eliminate, prevent or reduce the air pollution. The report shall be submitted within such time as the Director shall specify. The report for the elimination, prevention or reduction of air pollution

shall contain sufficient information, including, completion dates, to establish that the corrective measures can be executed with due diligence. If approved by the Director, the corrective measures and completion dates shall be embodied in a consent order issued pursuant to W. Va. Code §§ 22-5-1 et seq. If the report is not submitted as requested or if the Director determines that the methods and procedures set forth in the report are not adequate to reasonably control the air pollution he or she shall issue an order requiring the elimination, prevention or reduction of the air pollution.
[45CSR§5-8.3., 45CSR13, R13-0308, 4.1.6.]

5.2. Monitoring Requirements

5.2.1. None.

5.3. Testing Requirements

5.3.1. None.

5.4. Recordkeeping Requirements

5.4.1. None.

5.5. Reporting Requirements

5.5.1. None.

5.6. Compliance Plan

5.6.1. None

6.0 Coal Processing, Conveying Equipment, Coal Storage, [emission point ID(s): 1E - 31E, 35E – 38E, 40E - 47E, 50E - 52E, 54E, 59E, and 62E - 64E]

6.1. Limitations and Standards

6.1.1. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility (i.e., Conveyors C08-C10, C12-C16, C20-C31 and C35, Bins ST5 & ST9, Silos ST6 & ST7 and all associated transfer points) including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. **[45CSR16, 40 C.F.R §60.11(d)]**

6.1.2. The permittee shall not exceed the specified maximum throughputs listed in the following table:

Maximum Throughputs

Parameter	Limit 1 (TPH)[1]	Limit 2 (TPY)
Raw Coal into Wet Wash Plant	470	3,066,000
Total Clean Coal Loaded Out	290	2,001,000
Refuse Circuit @ Conveyer C35	400	750,000
Refuse Circuit @ Conveyer C20	400	1,752,000

(1) As based on the maximum design capacities limited under 6.1.6.

[45CSR13, R13-0308, 4.1.3.]

6.1.3. Fugitive particulate emissions resulting from use of haulroads, mobile work areas, and open stockpiling of coal shall be minimized by the following:

a. The one-way length of the refuse haulroad shall not exceed 1.0 mile.

b. The permittee shall maintain a water truck on site (the term "on site" includes all areas subject to vehicular traffic at the plant site including the county road from the former "Eckman Loadout" site to Route US 52) and in good operating condition, and shall utilize same to apply a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haulroads and other work areas where mobile equipment is used. The spray bar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the surface being treated.

The pump delivering the solution, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haulroads and work areas where mobile equipment is used.

c. All water sprays required on open storage piles shall apply a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from wind erosion or on-pile activity. All spraybars shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated.

d. The permittee shall properly install, operate and maintain winterization systems for all water trucks and/or water sprays in a manner that all such fugitive dust control systems remain effective and functional, to the maximum extent practicable, during winter months and cold weather. At all times, including periods of cold weather, the registrant shall comply with the water trucks and/or water sprays requirements of this permit.

e. The permittee shall install, operate and maintain a fugitive dust control system to prevent the generation of fugitive dust and to eliminate tracking of material from the site through the town of Keystone. This system shall include but not be limited to a new section of windscreen shall be installed at the former Loadout site, from Bridge Street to the nearby overpass bridge on Route US52. Said windscreen should be properly maintained including but not limited to the timely replacement or repair of any missing or damaged sections. Consistent with its status as a county road, the road leading from the bridge to the plant will not be considered to be part of the haulroad.

f. The permittee is authorized to open stockpile commingled coal in stockpile ST8 when clean coal silos are full. For the purpose of this permit, "commingled coal" is defined as a mixture of thermally dried and non-thermally dried coal of a ratio that is sufficient to minimize excess emissions of fugitive particulate matter.

[45CSR13, R13-0308, 4.1.5.]

6.1.4. The transfer points, as identified in the Process Flow Diagram included in Permit Application R13-0308F and attached to Permit R13-0308F, shall use the following control devices:

a. The following transfer points shall be required to use partial enclosures: T2 through T11, T15 through T18, T23 through T27, T29 through T40, T46 through T54, T58 through T59, and T62 through T63.

b. The following transfer points shall be required to use full enclosures: T13, T28, T55 through T57, and T61.

[45CSR13, R13-0308, 4.1.4.]

6.1.5. Visible emission limitation.

a. On and after the date on which the performance test is conducted or required to be completed under 40 CFR §60.8, whichever date comes first, an owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit 20 percent opacity or greater.

[45CSR16, 40 C.F.R §60.254(a), 45CSR13, R13-0308, 4.1.8.]

b. On and after the date on which the performance test is conducted or required to be completed under §60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of 40 CFR §60.254(b), as applicable to the affected facility.

1. Except as provided in paragraph (b)(3) of 40 CFR §60.254(b), the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

2. Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of 40 CFR §60.254(b).

[45CSR16, 40 C.F.R §60.254(b), 45CSR13, R13-0308, 4.1.9.]

c. The permittee shall not cause, suffer, allow or permit emission of particulate matter into the open air from any fugitive dust control system which is twenty percent (20%) opacity or greater. **[45CSR§5-3.4, 45CSR13, R13-0308, 4.1.6.b.]**

6.1.6. Only those emission units/sources as identified in Table 1.0, with the exception of any de minimis sources as identified under Table 45-13B of 45CSR13, are authorized at the permitted facility. In accordance with the information filed in Permit Application R13-0308F, the emission units/sources identified under Table 1.0 of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities, and shall use the specified control devices.

[45CSR13, R13-0308, §4.1.1.]

6.2. Monitoring Requirements

6.2.1. The permittee shall conduct monitoring/recordkeeping/reporting follows:

a. For the purpose of determining compliance with the opacity limits of 45CSR5 and 40 CFR 60 Subpart Y, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar week. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for four (4) consecutive weekly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

b. A record of each visible emissions observation shall be maintained, including any data required by 40 C.F.R. 60 Appendix A, Method 22 or Method 9, whichever is appropriate. The record shall include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records shall be maintained on site for a period of no less than five (5) years stating any maintenance or corrective actions taken as a result of the daily inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken.

[45CSR§30-5.1.c., 40CSR16, 40 C.F.R. §60.257(a), 45CSR13, R13-0308, 4.2.4.]

6.2.2. For the purposes of demonstrating continuous compliance with maximum throughput limitations set forth in 6.1.2, the permittee shall monitor and record the monthly and rolling twelve month throughput of each material specified under 6.1.2.
[45CSR13, R13-0308, 4.2.1.]

6.2.3. For the purposes of determining compliance with water truck usage set forth in 6.1.3.(b), the permittee shall monitor and record water truck activity on the refuse haulroad. At a minimum the permittee shall record the days the water truck was used on the refuse haulroad and, if the water truck is not used, the reason watering was not needed.
[45CSR13, R13-0308, 4.2.3.]

6.2.4. The permittee shall meet all applicable monitoring, compliance demonstration, and record-keeping requirements as given under 45CSR5, 45CSR7, and 40 CFR 60, Subpart Y.
[45CSR13, R13-0308, 4.2.6.]

6.3. Testing Requirements

6.3.1. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in the permit application and/or applicable regulations.
[45CSR13, R13-0308, 4.3.1.]

6.3.2. **Subpart Y - Performance Tests and Other Compliance Requirements.** An owner or operator of each affected facility that commenced construction, reconstruction, or modification on or before April 28, 2008, must conduct all performance tests required by §60.8 to demonstrate compliance with the applicable emission standards using the methods identified in §60.257.
[45CSR16, 40CFR§60.255(a), 45CSR13, R13-0308, 4.3.2.]

Note: The references to "this section" in the following conditions containing 40 CFR 60 Subpart Y requirements correspond to those of Subpart Y (see the citation of authority). The subsection numbering are those of 40 CFR 60 Subpart Y.

6.3.3. **Subpart Y - Performance Tests and Other Compliance Requirements.** An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of §60.8 and the methods identified in §60.257 to demonstrate compliance with the applicable emission standards in Subpart Y as specified in paragraphs (b)(1) and (b)(2) of this section.
[40CFR§60.255(b)]

(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.
[40CFR§60.255(b)(2)]

(i). If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.
[40CFR§60.255(b)(2)(i)]

(ii). If all 6-minute average opacity readings in the most recent performance are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.
[40CFR§60.255(b)(2)(ii)]

[45CSR16, 40CFR§60.255(b), 45CSR13, R13-0308, 4.3.3.]

6.3.4. **Subpart Y - Performance Tests and Other Compliance Requirements: Monitoring Visible Emissions or Digital Opacity Compliance System.** As an alternative to meeting the requirements in paragraph (b)(2) of this section, an owner or operator of an affected facility that commenced construction, reconstruction, or modification after April 28, 2008, may elect to comply with the requirements in paragraph (f)(1) or (f)(2) of this section.
[40CFR§60.255(f)]

(1) Monitor visible emissions from each affected facility according to the requirements in paragraphs (f)(1)(i) through (iii) of this section.
[40CFR§60.255(f)(1)]

(i). Conduct one daily 15-second observation each operating day for each affected facility (during normal operation) when the coal preparation and processing plant is in operation. Each observation must be recorded as either visible emissions observed or no visible emissions observed. Each observer determining the presence of visible emissions must meet the training requirements specified in §2.3 of Method 22 of appendix A-7 of this part. If visible emissions are observed during any 15-second observation, the owner or operator must adjust the operation of the affected facility and demonstrate within 24 hours that no visible emissions are observed from the affected facility. If visible emissions are observed, a Method 9, of appendix A-4 of this part, performance test must be conducted within 45 operating days.
[40CFR§60.255(f)(1)(i)]

(ii). Conduct monthly visual observations of all processes and control equipment. If any deficiencies are observed, the necessary maintenance must be performed as expeditiously as possible.
[40CFR§60.255(f)(1)(ii)]

(iii). Conduct a performance test using Method 9 of Appendix A-4 of this part at least once every 5 calendar years for each affected facility.
[40CFR§60.255(f)(1)(iii)]

(2) Prepare a written site-specific monitoring plan for a digital opacity compliance system for approval by the Administration or delegated authority. The plan shall require observations of at least one digital image every 15 seconds for 10-minute periods (during normal operation) every operating day. An approvable monitoring plan must include a demonstration that the occurrences of visible emissions are not in excess of 5 percent of the observation period. For reference purposes in preparing the monitoring plan, *see* OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods. The monitoring plan approved by the Administrator delegated authority shall be implemented by the owner or operator.
[40CFR§60.255(f)(2)]

[45CSR16, 40CFR§60.255(f), 45CSR13, R13-0308, 4.3.4.]

6.3.5. **Subpart Y - Performance Tests and Other Compliance Requirements: COMS.** As an alternative to meeting the requirements in paragraph (b)(2) of this section ***[see permit condition 6.3.3. above]*** , an owner or operator of an affected facility that commenced construction, reconstruction, or modification after April 28, 2008, subject to a visible emissions standard under this subpart may install, operate, and maintain a continuous opacity monitoring system (COMS). Each COMS used to comply with provisions of this subpart must be installed, calibrated, maintained, and continuously operated according to the requirements in paragraphs (g)(1) and (2) of this section.
[45CSR16, 40CFR§60.255(g), 45CSR13, R13-0308, 4.3.5.]

6.3.6. **Subpart Y - Performance Tests and Other Compliance Requirements: Truck Dump Operations.** The owner or operator of each affected coal truck dump operation that commenced construction, reconstruction, or modification after April 28, 2008, must meet the requirements specified in paragraphs (h)(1) through (3) of this section.
[40CFR§60.255(h)]

(1) Conduct an initial performance test using Method 9 of Appendix A-4 of this part according to the requirements in paragraphs (h)(1)(i) and (ii).
[40CFR§60.255(h)(1)]

(i). Opacity readings shall be taken during the duration of three separate truck dumping events. Each truck dump event commences when the truck bed begins to elevate and concludes when the truck bed returns to a horizontal position.
[40CFR§60.255(h)(1)(i)]

(ii). Compliance with the applicable opacity limit is determined by averaging all 15-second opacity readings made during the duration of three separate truck dump events.
[40CFR§60.255(h)(1)(ii)]

(2) Conduct monthly visual observations of all processes and control equipment. If any deficiencies are observed, the necessary maintenance must be performed as expeditiously as possible.
[40CFR§60.255(h)(2)]

(3) Conduct a performance test using Method 9 of appendix A-4 of this part at least once every 5 calendar years for each affected facility.
[40CFR§60.255(h)(3)]

[45CSR16, 40CFR§60.255(h), 45CSR13, R13-0308, 4.3.6.]

6.3.7. **Subpart Y - Performance Tests and Other Compliance Requirements.** If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or other coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building and emissions from the building do not exceed any of the standards in §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.
[45CSR16, 40CFR§60.255(c), 45CSR13, R13-0308, 4.3.7.]

6.3.8. **Subpart Y - Test Methods and Procedures.** The owner or operator must determine compliance with the applicable opacity standards as specified in paragraphs (a)(1) through (3) of this section.
[40CFR§60.257(a)]

(1) Method 9 of Appendix A-4 of this part and the procedures in §60.11 must be used to determine opacity, with the exceptions specified in paragraphs (a)(1)(i) and (ii).
[40CFR§60.257(a)(1)]

(i). The duration of the Method 9 of Appendix A-4 of this part performance test shall be 1 hour (ten 6-minute averages).
[40CFR§60.257(a)(1)(i)]

(ii). If, during the initial 30 minutes of the observation of a Method 9 of Appendix A-4 of this part performance test, all of the 6-minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes.
[40CFR§60.257(a)(1)(ii)]

(2) To determine opacity for fugitive coal dust emissions sources, the additional requirements specified in paragraphs (a)(2)(i) through (iii) must be used.
[40CFR§60.257(a)(2)]

(i). The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back.
[40CFR§60.257(a)(2)(i)]

(ii). The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction.
[40CFR§60.257(a)(2)(ii)]

(iii). The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission.
[40CFR§60.257(a)(2)(iii)]

(3) A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions specified in paragraphs (a)(3)(i) through (iii) of this section are met.
[40CFR§60.257(a)(3)]

(i). No more than three emissions points may be read concurrently.
[40CFR§60.257(a)(3)(i)]

(ii). All three emissions points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
[40CFR§60.257(a)(3)(ii)]

(iii). If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.
[40CFR§60.257(a)(3)(iii)]

[45CSR16, 40CFR§60.257(a), 45CSR13, R13-0308, 4.3.8.]

6.3.9. The permittee shall meet all applicable testing requirements as given under 45CSR5 and 40 CFR 60, Subpart Y.
[45CSR13, R13-0308, 4.3.10.]

6.4. Recordkeeping Requirements

6.4.1. See Section 3.4.

Note: The references to "this section" in the following conditions containing 40 CFR 60 Subpart Y requirements correspond to those of Subpart Y (see the citation of authority). The subsection numbering are those of 40 CFR 60 Subpart Y.

6.4.2. **Subpart Y - Recordkeeping.** The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain a logbook (written or electronic) on-site which documents the information specified in paragraphs (a)(1) through (10) of this section and make it available upon request.
[40CFR§60.258(a)]

(1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities. Any variance from manufacturer recommendation, if any, shall be noted. **[40CFR§60.258(a)(1)]**

(2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted. **[40CFR§60.258(a)(2)]**

(3) The amount and type of coal processed each calendar month. **[40CFR§60.258(a)(3)]**

(4) The amount of chemical stabilizer or water purchased for use in the coal preparation plant and processing plant. **[40CFR§60.258(a)(4)]**

(5) Monthly certification that the dust suppressant systems were operational when any coal was processed and that manufacturer's recommendations were followed for all control systems. Any variance from manufacturer recommendation, if any, shall be noted. **[40CFR§60.258(a)(5)]**

(6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g. objections, to the plan and any actions relative to the alternative control measures, e.g. approvals, shall be noted in the logbook as well. **[40CFR§60.258(a)(6)]**

(8) A copy of any applicable monitoring plan for a digital opacity compliance system and monthly certification that the plan was implemented as described. Any variance from plan, if any, shall be noted. **[40CFR§60.258(a)(8)]**

[45CSR16, 40CFR§60.258(a), 45CSR13, R13-0308, 4.4.4.]

6.5. Reporting Requirements

Note: The references to "this section" in the following conditions containing 40 CFR 60 Subpart Y requirements correspond to those of Subpart Y (see the citation of authority). The subsection numbering are those of 40 CFR 60 Subpart Y.

6.5.1. **Subpart Y - Reporting: Opacity Exceedances.** For the purposes of reports required under section 60.7(c), any owner or operator subject to the provisions of Subpart Y also shall report semiannually periods of excess emissions as specified in paragraphs (b)(1) through (3) of this section.

(3) All 6-minute average opacities that exceed the applicable standard.

[45CSR16, 40CFR§60.258(b), 45CSR13, R13-0308, 4.5.1.]

6.5.2. **Subpart Y - Reporting: Results of Initial Performance Tests.** The owner or operator of an affected facility shall submit the results of initial performance tests to the Administrator or delegated authority, consistent with the provisions of section 60.8. The owner or operator who elects to comply with the reduced performance testing provisions of sections 60.255(c) or (d) shall include in the performance test report identification of each affected facility that will be subject to the reduced testing. The owner or operator electing to comply with section 60.255(d) shall also include information which demonstrates that the control devices are identical.
[45CSR16, 40CFR§60.258(c), 45CSR13, R13-0308, 4.5.2.]

6.5.3. **Subpart Y - Reporting: WebFIRE Data Base.** After July 11, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test date to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at http://cfpub.eps.gov/oarweb/index.cfm?action=fire.main. For performance tests that cannot be entered into WebFIRE (i.e. Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code D243-01; RTP, NC 27711.
[45CSR16, 40CFR§60.258(d), 45CSR13, R13-0308, 4.5.3.]

6.5.4. The permittee shall meet all applicable reporting requirements as given under 45CSR5 and 40 CFR 60, Subpart Y.
[45CSR13, R13-0308, 4.5.4.]

6.6. Compliance Plan

6.6.1. None

APPENDIX A

45CSR10 Monitoring Plan

Thermal Dryer (65 MMBtu/hr – Fire Box)

SECOND STERLING CORPORATION
P.O. Box 1085
Beckley, WV 25802-1085
304/252-8528

July 25, 2001

Edward L. Kropp, Chief
West Virginia Division of Environmental Protection
OFFICE OF AIR QUALITY
7012 MacCorkle Avenue, SE
Charleston, WV 25304

RE: Plant ID# 047-00008
45CSR10A-5.2.c "Alternate to Compliance Testing"

Dear Mr. Kropp:

We request an alternate to compliance testing by demonstrating mathematically that the emissions rate of sulfur dioxide as determined by previous stack testing is significantly lower than 2000 ppm.

Two stack tests have been performed on this dryer. The first stack test was conducted by TRA-DET INC, LABORATORIES in November 1978, which represented the start up of the thermal dryer. The purpose of those tests was to determine emission rates of SO_2 and particulate matter. The second stack test was conducted by TRA-DET INC, COAL TECHNICAL SERVICES in February of 1998. The purpose of these tests was to determine the emission rates of NO_x.

Information used in the mathematical calculations for SO_2 emissions rates were taken from both mentioned stack test reports. The information used from the first stack test is tables 10 and 11 (Appendix A) Sulfur Oxide Emissions. There numbers represent the actual emissions of SO_2 found in the stack during the 1978 test and represent the SO_2 efficiency removal rate.

The information used from the second stack tests is Dryer Performance, page 8 and Performance Summary Keystone Thermal Dryer, page 11 (Appendix B). The information used from Appendix B was the percent sulfur of the coal burned, 0.81%. The fuel consumption during each of the two runs was 2.63 TPH and the stack flow rate was 75,499 DSCFM.

CALCULATIONS

A. Determine the amount of SO_2 loading out of the stack assuming no SO_2 removal in the dryer. There are 3 potential ways to remove SO_2 in the dryer:

1. Absorbed in the ash in the furnace
2. Absorbed in the moisture remaining in the coal being dried
3. Absorbed in scrubbers

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West Virginia Division of Environmental Protection
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This calculation will assume that there is no SO_2 removal and will represent the maximum SO_2 emissions in ppm.

SO_2 = Fuel consumed x % sulfur x 2 (conversion to SO_2)
= 2.63 tons/hr x 2000 lbs/ton x 0.0081 x 2
= 85.21 lbs/hr

$$\text{ppm } SO_2 = \frac{85.21 \text{ lbs/hr}}{\text{molecular weight of } SO_2 \text{ x stack flow volume x conversion to ppm}}$$

$$= \frac{85.21}{64 \times 75499 \times 1.56 \times 10^{-7}}$$

$$= \frac{85.21}{.7538}$$

$$= 113.04 \sim 113 \text{ ppm} < 2000 \text{ ppm}$$

Therefore with no SO_2 removal the amount of SO_2 emitted is 113 ppm, which is significantly less than the threshold limit of 2000 ppm.

B. Determine the amount of SO_2 loading out of the stack using the efficiency limits determined from the 1978 stack test. From Appendix A, the average SO_2 emissions were 0.78 lbs/hr. This was however based on a sulfur of .6 and a fuel consumption of 2.5 TPH.

With controls the 1978 test results avg. emissions was 0.78 lbs/hr.

$$\text{ppm} = \frac{0.78 \text{ lbs/hr}}{0.7538}$$

$$= 1.03 < 2000 \text{ ppm}$$

Therefore with controls the emissions rate in ppm is a mute point.

Through the above calculations it has been demonstrated that the emissions of SO_2 from the thermal dryer is very, very small compared to the threshold limit of 2000 ppm.

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Therefore, we submit this to you for approval as an alternate to compliance testing for SO_2. We will monitor on a weekly basis the sulfur content of the coal and the amount used to fire the thermal dryer.

We request that you approve this alternate to compliance testing.

Should you have any questions, please call me at 304/252-8528.

Respectfully submitted,

John D. Higginbotham, Jr.
Chief Engineer

JDHJr/plr

TABLE 10. SULFUR OXIDE EMISSIONS

KEYSTONE THERMAL DRYER

EASTERN ASSOCIATED COAL CORPORATION

RUN	NaOH IMPINGERS		FILTER CATCH		TOTAL
	gms SO_2/DSCM	lbs SO_2/hr.	gms SO_2/DSCM	lbs SO_2/hr.	lbs SO_2/hr.
1	0.0036	0.978	0.0024	0.643	1.621
2	0.0025	0.671	0.0023	0.617	1.288
4	0.0041	1.072	0.0023	0.601	1.673
5	0.0037	0.992	0.0026	0.688	1.680

TABLE 11.

SULFUR EMISSIONS

KEYSTONE THERMAL DRYER

EASTERN ASSOCIATED COAL CORPORATION

RUN	SULFUR EMISSIONS					CHANGE IN ACIDITY OF SCRUBBER WATER	FURNACE TEMPERATURE		
	IMPINGER CATCH		FILTER CATCH		TOTAL		PANEL BOARD	DRYER	DIFFERENCE
	SO_2	S	SO_2	S	S				
	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	mg/l. (as $CaCO_3$)	°F	°F	°F
1	0.978	0.490	0.643	0.322	0.812	+56.5	866	800	66
2	0.671	0.336	0.617	0.309	0.645	+31.5	844	796	48
4	1.072	0.536	0.601	0.301	0.837	+40.4	847	788	59
5	0.992	0.496	0.688	0.344	0.840	+43.3	964	900	64

APPENDIX B

8

DRYER PERFORMANCE

The performance of the dryer was determined conducting a heat and mass balance on the dryer system based on the measured coal moistures, the measured gas flows, and the assumed tonnage of the total clean coal product leaving the dryer (the actual readings from the belt scale on the dryer product are believed to be low, and the operators estimate of a 220 to 230 A/R TPH product rate was used for the calculation of the dryer throughput tonnage[3]. The moisture analysis of the coal samples collected during the two test runs were:

Sample	Run 1	Run 2
Dryer Feed	11.46%	11.34%
Deck Discharge	5.43%	4.88%
Cyclone Product	1.10%	0.76%
Total Product (calculated)	4.82%	4.30%

The analysis of the composite fuel sampled collected during the course of both Runs 1 and 2 was as follows:

	A/R	D/B
Moisture	5.21 %	
Ash	3.96 %	4.18 %
Sulfur	0.81 %	0.85 %
BTU	14,163 per lb.	14,941 per lb.
Volatile	19.47 %	20.54 %
Carbon	81.62 %	86.11 %
Hydrogen	4.39 %	4.63 %
Nitrogen	1.31%	1.38 %
Oxygen	2.70 %	2.85 %

[3] Calculated system performance substantiates the assumed tonnage and it is believed by the author to be a reasonably correct estimate of the actual product tonnage leaving the dryer.

Table 1:

11

PERFORMANCE SUMMARY
KEYSTONE THERMAL DRYER
February 1998

Location	Parameter	Run 1	Run 2	Average	Units
Furnace	Exit Temperature	1,334	1,286	1,310	°F
	Gross Heat Release	74.53	74.53	74.53	mmBTU/hr.
	Area Heat Relese	755,839	755,839	755,839	mmBTU/hr/ft^2
	Fuel Consumption	2.63	2.63	2.63	A/R TPH
	Combustion Air (required)	61,671	61,671	61,671	lbs./hr.
	Estimated Combustion Air	114,500	114,500	114,500	lbs./hr.
		85.7%	85.7%	85.7%	% excess
Inlet Air	Volume Flow[1]	74,741	75,877	75,309	ACFM
		74,930	76,068	75,499	DSCFM
	Mass Flow	338,370	343,512	340,941	lbs./hr.
	Temperature	40	40	40	°F
	Pressure	28.47	28.47	28.47	" HgABS
Deck Inlet	Temperature	915	902	909	°F
	Pressure	-0.3	-0.3	-0.3	" W.C.
	Volume Flow	207,989	209,123	208,556	ACFM
	Mass Flow	340,722	345,864	343,293	lbs./hr.
		79.2	80.4	79.8	lbs./ft^2/min.
Constriction Deck	Pressure Drop	5.3	5.6	5.5	" W.C.
	Rod Velocity	338	340	339	ft./sec.
Fluidized Bed	Pressure Drop	0.4	0.6	0.5	" W.C.
Cyclone Inlet	Volume Flow	128,141	130,558	129,350	ACFM
	Pressure	-8.6	-9.0	-8.8	" W.C.
	Temperature[2]	263	265	264	°F
Cyclones	Actual Pressure Drop	2.7	2.5	2.6	" W.C.
	Predicted Pressure Drop	2.8	2.8	2.8	" W.C.
Exhaust Fan	Inlet Flow	112,996	115,091	114,044	ACFM
	Temperature	173	175	174	°F
	Gas Density	0.0551	0.0549	0.0550	lbs./ft^3
	Pressure Drop	44	44	44	" W.C.
	Motor Amps	291	291	291	amps
	Motor Power	1,166	1,181	1,173	BHP
Scrubber	Saturation	25.3	24.1	24.7	% v/v
	Static Pressure	35.5	35.5	35.5	" W.C.
	Temperature	188	190	189	°F
	Condensation (water)	28	28	28	gal./min.
Stack	Temperature	113	113	113	°F
	Flow	94,168	95,582	94,875	ACFM
		74,930	76,068	75,499	DSCFM

Notes:

1. Includes air supplied as combustion air by underfire & overfire fans.
2. Based on reported temperature of drying chamber thermocouple.

File: perf summary
Sheet: Process

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