

*West Virginia Department of Environmental Protection
Division of Air Quality*

Fact Sheet



*For Final Renewal Permitting Action Under 45CSR30 and
Title V of the Clean Air Act*

Permit Number: **R30-04700008-2006**
Application Received: **April 24, 2006**
Plant Identification Number: **03-54-047-00008**
Permittee: **Second Sterling Corporation**
Facility Name: **Keystone Number 1 Plant**
Mailing Address: **P. O. Box 1085, Beckley, WV 25802-1085**

Physical Location: Keystone, McDowell County, West Virginia
UTM Coordinates: 460.328 km Easting • 4141.305 km Northing • Zone 17
Directions: From Charleston take I-77 south to exit 9. Proceed west on U.S. Route 460 to U.S. Route 52. Take U.S. Route 52 northwest to Keystone. At Keystone turn right on Bridge Street, cross the railroad tracks and turn right.

Facility Description

The Keystone Number 1 Preparation Plant (SIC 1221 and NAICS 212111), a wet-wash coal preparation plant with thermal dryer, has the ability to screen, crush/size, wash, thermally dry, store and load out/in coal. The maximum capacity of the preparation plant is 279 tons per hour/ 1,200,000 tons per year raw coal input. The facility has the potential to operate twenty-fours (24) hours a day for seven (7) days per week.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Criteria Pollutants	Potential Emissions	2005 Actual Emissions
Carbon Monoxide (CO)	55.00	32.75
Nitrogen Oxides (NO _x)	178.00	105.99
Particulate Matter (PM ₁₀)	826.55	71.70
Total Particulate Matter (TSP)	1,735.76	143.38
Sulfur Dioxide (SO ₂)	44.05	19.54
Volatile Organic Compounds (VOC)	127.00	75.62
Lead (Pb)	0.0038	0.002
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2005 Actual Emissions
Total HAPs	18.46	0.0336

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 826.55 tons per year of PM₁₀, 178.00 tons per year of NO_x and 127.00 tons per year of VOC. Due to this facility's potential to emit over 100 tons per year of these pollutants, Second Sterling Corporation is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR5	Control of particulate matter from coal preparation plants
	45CSR6	Open burning prohibited.
	45CSR10	Prevent and Control air pollution from the emission of sulfur oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary sources
	45CSR16	Standards of performance for new stationary sources pursuant to 40 CFR part 60
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	40 C.F.R. 60, Subpart Y	Requirements for coal preparation plants
	45CSR30	Operating permit requirement.

	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R30-04700008-1998	October 20, 2001	R13-0308A
		Issued August 27, 2002
		Modification to change the chemical properties of the fuel being used to run the thermal dryer.

		CO-R-13-E-2002-52
		Issued December 9, 2002
		Exceed the SO ₂ limit of R13-0308A per Stack Test done on May 7, 2002

		CO-R-13-E-2003-21
		Issued June 12, 2003
		1. Dismantle and remove various equipment from the Eckman Loadout site by 6-1-03, add fugitive dust control measures
		2. Install, operate, and maintain SO ₂ control equipment to the thermal dryer plus equipment associated with the alkalinity addition
		3. Install, operate, and maintain fugitive dust control measures to eliminate tracking of material through the town of Keystone. Street sweeping. Install windscreen at the former Loadout site. Install new bridge to eliminate truck traffic.
4. Submit a complete and comprehensive 45CSR13 permit modification application.		
<ul style="list-style-type: none"> • Increase in emissions of SO₂, PM, and other critical pollutants • Increase maximum sulfur content of coal burned in dryer • Install automated sulfur dioxide emissions control system • Operational changes ensure compliance with the proposed SO₂ limitations • Inclusion of coal and synthetic fuel storage and rail loading activities at the Eckman Loadout • Fugitives dust control measures as outlined in Item 3. 		
5. Submit a complete and comprehensive 45CSR30 permit modification application		

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R30-04700008-1998	October 20, 2001	<p>6. Submit a written and certified response to any Notice of Deficiency or written request for additional information-45CSR13 and 45CSR30 permit applications. 20 days turn around.</p> <p>7. SO₂ emissions from Thermal dryer stack and removal efficiency of the automated SO₂ control equipment</p> <p>8. Submit test results of Item 7 within 45 days after completion of the tests.</p> <p>9. Test results from Item 8 shall be used for operational parameters and ranges for 45CSR13 and 45CSR30 permit modifications and establish operational parameters and ranges for monitoring continuing compliance of the SO₂ emissions from the thermal dryer.</p> <p>----- R13-0308B Issued December 03, 2003</p> <p>As a result of CO-R-13-E-2003-21, Modification of a coal preparation plant including the addition of a synfuel storage and handling circuit and revision of thermal dryer emission rates.</p> <p>----- R13-0308C Issued December 03, 2003</p> <p>Class I administrative update to correct a typographical error in Permit R13-0308B. The hourly feed rate to open stockpile ST1 should be 470 TPH as opposed to the 450 TPH listed. Calculations were based on 470 TPH so there will be no change in emissions.</p> <p>----- R13-0308D Issued July 14, 2006</p> <p>Incorporated the requirements of consent order CO- R-13-E-2003-21.</p> <p>----- R30-04700008-1998 SM01 The renewal Title V Permit Application was received prior to the significant modification being issued. Thus, the two were merged and the significant modification can be withdrawn.</p>
R13-0308D Class I administrative update submitted per the requirements of CO-R13-E-2003-21. Specifically, the pH set-point of the scrubber influent is added.	July 14, 2006	
R13-1142 Construction of 2-1,900 ton coal storage bins and associated conveying equipment.	September 20, 1989	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit

in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

The changes to the October 24, 2001 Title V Permit and Fact Sheet were four (4) R13 permits and two (2) consent orders. The R13 permit and the consent orders are:

1. R13-0308A Permit was for the change in sulfur and ash content of the coal that is used to fire the thermal dryer.
2. R13-0308B Permit was the result of Consent Order CO-R-13-E-2003 involving (1) the SO₂ emissions of the thermal dryer, (2) synfuel and handling circuit, (3) fugitive dust control measures, and (4) the revision of the thermal dryer emission rates.
3. R13-0308C Permit was a Class I administrative update to correct a typographical error.
4. CO-R-13-E-2002-52 was for the control of sulfur dioxide.
5. CO-R-13-E-2003-21 has nine issues, which are highlighted in the table for Active Permits and Consent Orders. According to the consent order CO-R13-E-2003-21, Compliance Program Section III Item 9, Second Sterling is to submit a 45CSR13 and a 45CSR30 permit modification for their Keystone #1 Plant after thermal dryer stack test completion. The stack test was completed on July 26-29, 2005. DAQ received a final copy on October 5, 2005.
6. R13-0308D, Class I administrative update submitted per the requirements of CO-R13-E-2003-21. Specifically, the pH set-point of the scrubber influent is added.

40 C.F.R. Part 64 - Compliance Assurance Monitoring (CAM)

This facility does have a pollutant specific emissions unit with a control device to meet an applicable standard or limit. Thus, the CAM rule, 40 C.F.R. Part 64, applies to this facility which is required to obtain a Title V permit and satisfy the following criteria:

1. The emissions unit is subject to an emissions limitation or standard with exceptions noted in 40 C.F.R. § 64.2(b)(1);
2. The emissions unit uses a control device to achieve compliance with the emissions limitations or standards; and,
3. The unit has a potential to emit emissions of the applicable regulated pollutant that are equal to or greater than 100% of the amount, in tons per year, required to be classified a major source.

WVDAQ believes that the monitoring and record keeping procedure presented by the permittee will be adequate in controlling particulate matter and sulfur dioxide from the thermal dryer. This plan meets the requirements of the CAM rule.

The control units subject to CAM at this facility are the cyclone system and wet scrubber collection devices.

A. Cyclone System

The Cyclone System is subject to CAM for the following criteria:

1. The 82" diameter involute dry cyclones are used to reduce the large particle size grain loading before entry into the wet scrubber. The maximum allowable particulate loading for the thermal dryer shall not exceed 0.031 grains per cubic foot. The cyclone is guaranteed to remove 90% of the minus 28 mesh fines.
2. The cyclone is used to control particulate matter and opacity.
3. Before controls, the particulate matter emissions rate is above the major source level of 100 tons per year.

The indicators selected are the opacity monitoring, pressure drop ranges, and inlet temperature to the control device, record keeping as well as maintaining maintenance records of the control device. These selected are based on the operating practice of the control equipment operation and the July 26-29, 2005 stack test. The temperature and pressure drops indicators are manually monitored and recorded once per 8-hour period or once per shift.

B. Wet Scrubber Collection Device

The wet scrubber is subject to CAM for the following criteria:

1. The wet scrubber uses the energy and captures ability of water particles in order to remove particulate matter from the gas stream. The scrubber design is a Flex-Kleen wet scrubber.
2. The scrubber has capture efficiency of 100% and control efficiency of 100% for particulate matter and 100% for sulfur dioxide.
3. Before controls the potential emissions for particulate matter and sulfur dioxide each exceeded 100 tons per year.

The indicators selected are the opacity monitoring, water pressure to the control equipment, pressure loss of the inlet airflow to the scrubber, pressure drop ranges across the scrubber, record pH set-point of the scrubber influent, and record keeping. The point for the scrubber influent is 5.0. These selected are based on the operating practice of the control equipment operation and the July 26-29, 2005 stack test. These indicators are manually monitored and recorded over a 8-hour period or once per shift.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

45CSR§10-5. (08/31/2000)	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
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Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: August 30, 2006
Ending Date: September 29, 2006

All written comments should be addressed to the following individual and office:

Wayne Green
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Wayne Green
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. (1258) • Fax: 304/926-0478

Response to Comments (Statement of Basis)

CAM charts for the Cyclone Device and for the Wet Scrubber were added to the Title V Permit at USEPA Region 3 request.