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5-30-00

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
SOURCE INSPECTION REPORT FORM

I. GENERAL INFORMATION

SOURCE NAME: **Norfolk Southern** REGISTRATION NO.: **60180**

LOCATION: **Norfolk, 2200 Redgate Ave.** INSPECTION DATE: **May 15 & 24, 2000**

COUNTY - PLANT - FILE NO.: **710-48-388**

SOURCE CLASS: **x** A _ SM _ B _ NSPS _ PSD _ NESHAP _ MACT ___

SOURCE CONTACT: **Steve Burnette, Denny Mullins, Jerry Clemmer**

WEATHER CONDITIONS: **65◦F; Partly cloudy, 15 mph NE winds**

TYPE OF INSPECTION:

X CMS **X** Complete _ Permit Completion

_ Surveillance _ Follow up

_ Stack Test _ Complaint Investigation

_ CEMS Audit _____

OTHER (EXPLAIN) _____

ANNOUNCED INSPECTION: **NO**

INSPECTION LEVEL PERFORMED: **2** COMPLIANCE CODE: **3**

VEE PERFORMED: **NO**

OPERATING RATE: **TYPICAL**

INSPECTOR: **KEN PINZEL** STAFF CODE: **1071**

CODING INFORMATION FOR COMPLIANCE STATUS

0 - UNKNOWN
1 - IN VIOLATION - NO SCHEDULE
2 - IN COMPLIANCE BY SOURCE TEST
3 - IN COMPLIANCE BY INSPECTION
4 - IN COMPLIANCE BY CERTIFICATION
5 - IN VIOLATION, MEETING SCHEDULE
6 - IN VIOLATION, NOT MEETING SCHEDULE
7 - IN VIOLATION, UNKNOWN WITH RESPECT TO SCHEDULE
8 - NO APPLICABLE REGULATION
9 - IN COMPLIANCE, CLOSED

II. PROCESS DESCRIPTION:

General: This is a coal terminal. Coal is transported from the mines to the facility via rail car. Most of the coal remains in the cars until transfer to a ship. Some is off loaded for temporary storage in two surge silos.

Dumpers: Rail cars move through a thaw house where heaters can warm the car melt ice. From there, two cars at a time move to a dumper which rolls them over dumping the coal into a hopper.

TAD 5/24/00

Dust is controlled during dumping by spraying a water (possibly with surfactant) at a maximum of 3 levels. Also, fiberglass panels, about 8 ft. high, have been installed along the exterior side of each dumper to provide wind protection.

Conveyor Transfer & Surge Silos: Conveyors carry the coal either to the ship or to the surge silo. The silos have dust collectors. Some of the conveyors (C_{ext}, $C1_{ext}$, T, T1 & SR) have hoods and wind guards. The wind guard & hood are separated by gap about 4 in. wide to allow access and visible inspection. Transfer points have water sprays.

III. INSPECTION COMMENTS:

A. PERMIT for SURGE SILO'S & ASSOC. CONVEYORS: A permit was issued April 6, 1992, for the two surge silos and 5 conveyors (T, T1, C_{ext}, $C1_{ext}$, & SR). The following table is a review of non-construction permit conditions and compliance status.

PERMIT REQUIREMENT	COMPLIANCE STATUS
5. FUGITIVE DUST at TRANSFER PTS.: Achieve no visible emissions through wet suppression and as necessary, surfactant.	OK. No visible emissions observed.
7. COAL THRUPUT: Max. throughput of 55,000,000 tons for any consecutive 12 month period. Interpretation: limit is for the entire facility, even though the permit addresses only a portion of the facility.	OK. Total coal dumped from the whole facility was 20,254,536 in 1998. Monthly totals are < 1/12 of limit.
9. OPACITY: Max. opacity from baghouse exhausts is 5%.	OK. No visible emissions from baghouses (They turned exhaust fan on for demo.)
10. RECORDS: Keep records of a) monthly thruput of coal, & b) weekly pressure drop across each baghouse.	a) OK. b) OK. Entries are made in the pressure drop log each shift if the silo is in use. Pressure drops are typically 1.5 - 2 in. w.c. My readings today: 0.4 & 1.0 on S and S1, respectively.
15. MINIMIZE MALFUNCTIONS: For process & APC equipment, a) develop maintenance schedule, b) maintain records of schedule & non-scheduled maintenance, c) maintain inventory of spare parts.	a) OK. Maintenance done on baghouse when pressure drop is out of range (6-8 in. for 2-3 times). b) OK. Baghouse: Log has been set up. Maintenance is infrequent; last entry was 3/96. They also do daily inspections using a check off sheet. They schedule monthly inspections but may miss a month if manpower is unavailable. c) OK. 1 full set of replacement bags, some nozzles.
16. OPERATING PROCEDURES & TRAINING: For facility & APC equipment: a) written operating procedures, b) operators trained in operation of APC equipment & familiar with written operating procedures, c) records of training (names, dates, & nature).	a) Operating procedures are in a manual entitled, "Operating Procedures for Surge Silo System ...," dated 2/21/94. It includes baghouse and wet suppression system. b) & c) **Problem:** No recent training records are available.

B. FUGITIVE DUST: Rule 4-1 requires, *"reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following: ... 2. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles and other surfaces which may create airborne dust; the paving of roadways and maintaining them in a clean condition. 3. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials. ... 4. Open equipment for conveying or transporting materials likely to create, objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion. 5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion."*

1. OBSERVATIONS:

Roadways	Roadways are paved. They were relatively clean. According to the 1st shift operators of the sweeper truck and vacuum truck, the sweeper is used to clean the pier and the vacuum truck is used to clean out a pit and the thaw shed. They say that there are no visible emissions from the exhaust of the vacuum.
Dumper	**Not good:** The amount of fugitive dust varied from one dump to another. Some had visible emissions with an instantaneous opacity up to 60%. The spray system appeared to be operating normally, although a few nozzles were not spraying. Those nozzles could not have contributed noticeably to the dust cloud. The coal in the car appeared to be quite dry. This may have been a contributing factor. As they have mentioned before, other factors are the type of coal and the rate of dumping. The dustiest dump observed at the dumper seemed to also be the fastest. We don't know whether it was a dusty type of coal. The front sprays are very effective in dropping the cloud of dust as is rises. The rear sprays are not nearly as effective. That cloud rises after the coal has dropped out of the car. I questioned whether better control with even less water might be possible by sequencing the sprays differently and/or repositioning them. Perhaps a baffle redirecting the cloud would be effective. Perhaps redirecting the sprays away from the hopper would work well. If the water does not enter the hopper, the coal will be drier, pleasing customers. The spray with entrained coal could be directed toward a collection hood where solids and water could be separated, with solids being returned to the hopper.
Conveyors	Conveyors are covered. Transfer points have sprays. No visible emission were noted today. The sprays were not in use. Some wondered whether they have ever been used.
Rail Cars	Coal in many rail cars have been treated with a crusting agent to minimize emissions in transit and while sitting in the yard. No visible emissions were noted.
Ship	**Problem?** The level of coal in the hold at the corners was perhaps 10 feet below the top. The delivery chute was depositing coal into the corner. The chute was partially above the hold. Of the entrained dust, some was hitting the hold doorway and blowing out. Most of the ship's bow deck, orange in color, was black with coal deposits. Deck near the hold had enough coal to shovel. I questioned whether the spray bars at transfer points should have been on.
Complaints	They say complaint incidence has dropped to almost none. There may not have been any complaints in the last year.

2. Dumper: Water/surfactant is sprayed during each dumping in non-freezing weather. The system was off for about two weeks last winter due to cold weather. Surfactant is added in a ratio of 1 gal. to 1500 gal of water.

Improvements have been made to the system with the result that nozzles do not clog as often: a) water is pre-filtered, b) better nozzles are used, c) water is stored in a new, larger tank allowing sediment to settle out and d) a larger inventory of spare parts is maintained. To reduce wind impact around the dumpers, fiberglass screens have been erected along the length of each dumper. The screens are about 8 ft. tall. They cover about half the height.

C. OTHER EQUIPMENT: They have 3 safety kleen type parts washers and one paint booth which has not been used for well over a year.

IV. ENFORCEMENT: A Request for Corrective Action was issued for operator training records and to add scheduled maintenance for the wet suppression system for the conveyors.

INSPECTOR'S SIGNATURE K Pinzel **DATE:** May 24, 2000

SUPERVISOR'S COMMENTS: _____

SUPERVISOR'S SIGNATURE R.C. Raftt **DATE:** 5/26/00

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The following pages contain the Optical Character Recognition text of the preceding scanned images.

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SOURCE CONTACT: Steve Burnette, Denny Mullins, Jerry Clemmer
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TYPE OF INSPECTION:
X CMS X Complete Permit Completion
Surveillance Follow up
Stack Test Complaint Investigation
CEMS Audit
OTHER (EXPLAIN)
ANNOUNCED INSPECTION: -NO
INSPECTION LEVEL PERFORMED: 2 COMPLIANCE CODE: 3
VEE PERFORMED: NO
OPERATING RATE: -TYPICAL
INSPECTOR: KEN PINZEL STAFF CODE: 1071

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