



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Walleye Power, Oregon, OH

FROM: Gunnar Brown, Environmental Scientist/Engineer
AECAB (MI/WI)

THRU: Sarah Marshall, Section Supervisor
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: Walleye Power

Facility Location: 4701 Bay Shore Rd, Oregon, OH 43616

Date of Inspection: July 18, 2024

EPA Inspector(s):

1. Gunnar Brown, Environmental Scientist/Engineer
2. Jacob Herbers, Environmental Engineer

Other Attendees:

1. Frederick Kraemer, Walleye Power, Plant Manager, Walleye Power, LLC.
2. Ray Circle, Walleye Power, Operations Manager, Walleye Power, LLC.
3. Cody Magann, Environmental Manager, Walleye Power, LLC. (Closing Conference only)

Contact Email Address: cmagann@bayshore-opo.com

Purpose of Inspection: To evaluate compliance with the CAA and the facility's permits

Facility Type: Petroleum Coke Power Plant

Facility Name: Walleye Power
Facility Location: 4701 Bay Shore Rd, Oregon, OH 43616
Date of Inspection: July 18, 2024

Regulations Central to Inspection: The facility's operation and construction permits, and the National Emission Standards for Hazardous Air Pollutants (NESHAP) Subparts Da and UUUUU for the Circulating fluidized bed boiler (B006), and Subpart OOO for the Limestone Crushing and Sizing Operation (P901).

Arrival Time: 08:40 EDT

Departure Time: 10:30 EDT

Inspection Type:

☒ Unannounced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Fred Kraemer, Ray Circle, and Cody Magann unless otherwise noted.

Process Description:

Walleye Power's plant at Bay Shore (the Facility) uses petroleum coke (pet coke) to generate heat which is converted into electrical power. Pet coke is received and transported via conveyor to the pet coke piles (Images 2-3, 10). The pet coke is then moved from the piles by a bulldozer onto a conveyor and transported to a mechanical crusher. The pet coke is crushed for improved burning and injected into the boiler (Image 11). Limestone is crushed and injected into the boiler during the burning process to capture SO₂. Unburnt bed ash containing limestone is recycled back into the boiler with the bed ash reinjection system. Secondary air is also introduced during the burning to help control the burn and temperature in the system. Flue gas generated from the burning process is cooled from 1650 °F to 250 °F with water (Image 7). Cooled flue gas is sent through cyclones and fluidized coolers, and to an 8-compartment baghouse (Image 12) where fly ash is captured and stored in one silo (Image 8) and taken away by truck daily.

Staff Interview:

There are currently 72 employees at the facility. The Facility operates 24 hours per day, seven days per week with two shutdowns per year (spring and fall), lasting 10-14 days. The facility burns 42,000 – 43,000 tons/month of pet coke during normal operations. Only one stack is currently active with its corresponding power unit (Image 4), which was converted from coal to pet coke around 2000-2001. The other stacks were decommissioned before Walleye Power purchased the Facility in August 2018. The only modification since then was the installation of a bed ash reinjection system to recycle limestone back into the boiler. The next Mercury and Air Toxics Standards (MATS) stack test is scheduled for August 2024.

The baghouse operates within a pressure differential of 4.0 – 6.2 in. H₂O (Image 9), with a “high alarm” at 12 in. H₂O, and a “high high alarm” at 22 in. H₂O. They change the bags during every Fall shutdown, and as needed. The boiler trips if multiple baghouse compartments are not operational. The Facility has CO, CO₂, NO_x, and SO₂ Continuous Emissions Monitoring Systems (CEMS)

Fuel oil is only used during startups for a period of approximately 16-18 hours. A combustion turbine that burns fuel oil is used as backup but has only been used four times in the past 18 years. Coal is not used as a backup fuel.

The Facility waters the gravel roads, and sprays the pet coke piles as needed, which is usually only during periods of high winds.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

EPA inspectors toured the grounds of the Facility around the pet coke piles, inside the building containing the boiler, the top of the baghouse system, and the fly ash silo. On the tour, EPA inspectors observed emissions from a small stack (Image 3), the staff stated that the emissions were steam from a blowdown tank. EPA inspectors observed emissions information readouts from the active stack, including 0.07 lb/MMBtu NO_x 30-day rolling average, 0.35 lb/MMBtu SO₂ 30-day rolling average, and a negative opacity reading. Staff informed EPA inspectors that the opacity detector was undergoing its daily calibration at the time of inspection.

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Current standard operating procedures (SOPs), and/or operations and maintenance (O&M) plans for the boiler and baghouse
- Current process flow diagram(s)
- Summary, diagram, and financial documentation of the recent bed ash reinjection system addition
- Annual fuel oil use since 2020
- Spreadsheet or table of 30-day rolling average SO₂ and NO_x emissions rate data for each day since 01/01/20
- Visible emission inspections documentation for all emission units from the most recent month

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- Documentation of sulfur content in pet coke and diesel since 2020

DIGITAL SIGNATURES

Report Author: GUNNAR BROWN  Digitally signed by GUNNAR BROWN
Date: 2024.08.05 06:39:13 -05'00'

Section Supervisor: SARAH MARSHALL  Digitally signed by SARAH MARSHALL
Date: 2024.08.05 07:21:08 -05'00'

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APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Gunnar Brown **Archival Record Location:** EPA Electronic Files

Image #	File Name	Date & Time (CDT)	Image Description
1	P7180062.PNG	07/18/2024 08:14	Limestone pit to the left of the building and tower containing crushing equipment for limestone
2	P7180063.PNG	07/18/2024 08:16	Pet coke pile with conveyer to mechanical coke crusher on the right
3	P7180064.PNG	07/18/2024 08:23	View from the south of the pet coke pile. Visible emission from facility which Fred said was steam blow down.
4	P7180065.PNG	07/18/2024 08:38	View of facility with only active stack visible (silver top)
5	P7180066.PNG	07/18/2024 08:41	CFB overview in elevator
6	P7180067.PNG	07/18/2024 08:42	Filter system for silo loading
7	P7180068.PNG	07/18/2024 08:45	Path for flue gas
8	P7180069.PNG	07/18/2024 08:47	Fly ash collector and silo
9	P7180070.PNG	07/18/2024 08:51	Fly ash collector differential pressure gauge
10	P7180071.PNG	07/18/2024 08:52	Pet coke pile from top of bed ash silo
11	P7180072.PNG	07/18/2024 08:55	Fuel feeders
12	P7180073.PNG	07/18/2024 09:06	Top of baghouse
13	P7180074.PNG	07/18/2024 09:08	Induced draft fan
14	P7180075.PNG	07/18/2024 09:11	CEMS equipment duct
15	CAA-0000367 CBI-Walleye- 76.PNG	07/18/2024 09:19	Photo of TV Screen Claimed as CBI