



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 6TH AVENUE
SEATTLE, WASHINGTON 98101

DATE: See date of Section Chief signature

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
NuStar Portland Terminal, Portland, Oregon

FROM: Daniel Heins, Environmental Scientist
Air Toxics Enforcement Section, EPA Region 10

THRU: Derrick Terada, Acting Section Chief
Air Toxics Enforcement Section, EPA Region 10

TO: File

BASIC INFORMATION

Facility Name: NuStar Portland Terminal
Facility Location: 9420 NW St. Helens Road, Portland, OR 97231

Date of Inspection: June 22, 2022

EPA Inspector(s):

1. Daniel Heins, Environmental Scientist

Other Attendees:

1. Ryan Groesbeck, Terminal Manager – Nustar
2. Kyle Bell, Operations Supervisor – NuStar
3. Mike Wise, Operator – NuStar
4. Stephan Rosen, HSE Manager, West Region – NuStar
5. John Browning, Consultant – Bridgewater Group
6. George Yun, Air Quality Inspector – Oregon Department of Environmental Quality (DEQ)
7. Chris Moore, Air Quality Inspector – DEQ

Contact Email Address: Ryan.Groesbeck@nustarenergy.com

Purpose of Inspection: Tanks inspection

Facility Type: Bulk fuels terminal / gasoline distribution facility

Arrival Time: 10:40

Departure Time: 13:15

Inspection Type: Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☐ Provided Small Business Resource Information Sheet
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from NuStar representatives.

Name/Ownership Notes:

Shore Terminals is the legal name for NuStar's Portland facility, NuStar has owned and operated the Facility since 2008.

Process Description:

NuStar receives, stores, blends, and/or distributes gasoline, diesel, transmix, ethanol, and biodiesel at its Portland Terminal ("the Facility"). The Facility receives petroleum products via the Olympic Pipeline; all products via marine vessels; and ethanol/biodiesel primarily by rail, but also truck. The Facility sends petroleum products to Eugene via pipeline. All products are loaded out onto trucks. Diesel is the only product also loaded onto marine vessels. The Facility has a vapor combustion unit (VCU) and a backup vapor recovery unit for the truck rack. The VCU is permitted for marine loading use, but is not connected as they only load diesel.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA made observations with a FLIR GF320 optical gas imaging camera ("the FLIR"), capable of seeing hydrocarbon emissions plumes. EPA also used a Thermofisher TVA2020 flame ionization device ("the TVA") to measure the total hydrocarbon concentration in parts per million as methane (ppm) from vents or through hatches at the tops of tanks.

Daniel Heins, accompanied by DEQ and the NuStar personnel, began at the southeast end of the Facility and moved toward the northwest end as the site tour progressed. See Appendix A for site maps. All readings and videos are summarized in Appendices B & C.

In Tank Yard 5, Daniel Heins observed plumes from gasoline tanks 10026 and 10027 with the FLIR, and took readings using the TVA from the center vents on the roofs of each of these tanks.

In Tank Yard 4, the tank roofs are interlinked by causeways. Daniel Heins walked between tanks to directly take readings with the TVA from tank roof center vents. Tanks 1011 and 3201 contained ethanol; Tank 1009 contained transmix; Tanks 2706, 4507, 6408, 4402, 3203, and 3404 contained gasoline.

In Tank Yard 3, Daniel Heins observed plumes from tanks 8308, 5209, and 8006 with the FLIR, all of which contained gasoline. The FLIR camera exhausted its battery at this time. Daniel Heins took TVA readings at the center vents of those three tanks. Daniel Heins also took TVA readings of tank 8007 (gasoline), with the Facility opening a hatch to allow for the reading.

In Tank Yard 2, Daniel Heins took TVA readings from the center vents of tanks 2020, 2021, 2022, and 5618 (all gasoline), as well as 5618 (a diesel tank en route to a 5618).

In Tank Yard 1, Daniel Heins took TVA readings at the hatch of tank 5901.

Photos and/or Videos: were taken during the inspection. See Appendix B.
Field Measurements: were taken during this inspection. See Appendix C.

RECORDS REVIEW

Ahead of the inspection, Daniel Heins requested and reviewed a site map and a list of storage tanks with details of tank product, construction, size, and applicable air regulations.

CLOSING CONFERENCE

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

Requested documents:

Daniel Heins requested tank levels of selected tanks at the Facility from the time of the inspection.

Concerns:

Daniel Heins noted the moderately to significantly elevated hydrocarbon concentrations at many of the tanks, and that concentrations would likely be significantly higher towards the bottom of the tank headspace. Daniel Heins noted that this could potentially be an indication of an issue in the performance of the internal floating roof in suppressing emissions and that there is potential that the concentrations may be high enough at the bottom to pose a safety concern.

DIGITAL SIGNATURES

Heins,
Daniel



Digitally signed by
Heins, Daniel
Date: 2022.07.14
12:19:52 -07'00'

Daniel Heins, Report Author

DERRICK
TERADA



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DERRICK TERADA
Date: 2022.07.18
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Derrick Terada, Acting Section Chief