UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW
ATLANTA, GEORGIA 30303-8960

SENT VIA ELECTRONIC MAIL

Kevin Clark
Terminal Operations Supervisor
Shell Oil Products US
1717 61st Avenue North
Nashville, Tennessee 37209
Kevin.Clark@shell.com

Dear Mr. Clark:

Enclosed is a copy of the final report generated by the U.S. Environmental Protection Agency's Region 4, North Air Enforcement Section, for the inspection conducted at the Shell Oil Products US facility, located in Nashville, Tennessee, on July 12, 2022.

If you have any questions, please contact me at 404-562-8134, or by email at Zhong.Baichen@epa.gov.

Sincerely,

BAICHEN ZHONG
Digitally signed by BAICHEN ZHONG
Date: 2022.09.01 16:53:42 -04'00'

Baichen Zhong
Environmental Engineer
North Air Enforcement Section

Enclosure

CC: John Finke, Nashville Metro Public Health Department

ENCLOSURE A
FINAL INSPECTION REPORT

United States Environmental Protection Agency (EPA) Region 4

Air Enforcement Branch

Inspection Report

I. GENERAL INFORMATION

Facility Name: Shell Oil Products US

Location (Address): 1717 61st Avenue North, Nashville, TN

Inspection Date: 7/12/2022

Type of Inspection (Full or Partial Compliance Evaluation): Partial Compliance Evaluation

ICIS-Air Number: TNNDC0004703700065-2022

EPA Investigator(s)/Inspector(s):

1. Baichen Zhong, Environmental Engineer
2. Nicole Radford, Environmental Scientist

State/Local Investigator(s)/Inspector(s):

1. Eric McCann, MPHD
2. Natalie Tooley, MPHD

Person(s) Contacted at Facility (Name and Title):

1. Ben Graham, Lead Operator
2. Kevin Clark, Terminal Operations Supervisor

Report Prepared by: Baichen Zhong

II. FACILITY INFORMATION

A. Facility and Permit Information

Facility and Permit Information	Comments
1. Type of facility (e.g., chemical plant, refinery, cement manufacturer, etc.).	Bulk petroleum distribution terminal.
2. Air permit number(s) and type of permit (e.g., Title V, PSD, Synthetic Minor, etc.).	The Shell Oil Products US facility is operating under Synthetic Minor Operating Permit Nos. 65-1, 65-2, 65-3, 65-8, 65-9, 65-10 and 65-11. These permits are issued by the Metro Public Health Department of the Metropolitan Government of Nashville and Davidson County.
3. Air permit issuance date.	Date of Issuance: July 1, 2022
4. Air permit expiration date.	Expiration Date: June 30, 2023
5. Facility classification (Major, Synthetic Minor/Conditional Major, Minor).	Shell Oil Products US is classified as a Synthetic Minor source.
6. Major source pollutants (if applicable).	VOCs
7. Applicable regulations (e.g., State Implementation Plan, MACT Subpart FFFF, NSPS Subpart EEEE, etc.).	40 C.F.R. Part 63 Subpart BBBBBB
8. Types of air emission points (e.g., tanks, process vents, boilers, etc.).	Tanks and truck loading racks
9. Types of air pollution control equipment (e.g., baghouse, scrubber, afterburner, etc.).	A Vapor Recovery Unit (VRU) is used to control emissions at the loading rack. A Vapor Combustion Unit (VCU) serves as backup for the VRU.

B. Process Description (provide narrative or attach description provided by the company or excerpts from the permit)

Shell Oil Products US is a bulk gasoline facility that handles gasoline, diesel fuel, ethanol, additives, and other volatile organic products. These products are delivered to the facility by pipeline, or trucks in the case of ethanol, and stored in internal floating roof and fixed roof storage tanks. The products are loaded into trailer trucks using loading racks at the facility. Hours of operation for truck fueling are 24 hours per day, 7 days per week. The terminal is manned Monday – Friday during the day.

III. INSPECTION ACTIVITIES

Activity	Yes No NA	Comment
Opening Meeting		
1. Date and time entered the facility.	Y	The EPA Region 4 (R4) inspectors conducted the inspection on July 12, 2022 and entered the facility at 8:00 am.
2. Credentials presented to facility personnel (include name and title).	Y	Upon arrival on site, R4 inspectors presented credentials to Kevin Clark, the Terminal Operations Supervisor during the opening meeting.
3. Conducted an opening meeting to explain the purpose and objectives of the inspection.	Y	An opening meeting was conducted, which was led by Nicole Radford (R4). The purpose of the inspection was explained. The facility was also informed that the focus of the inspection would be on compliance with the NESHAP 6B, observing gasoline storage tanks, the loading racks, the vapor control units and the process contact water (PCW) systems.
4. Discussed safety issues.	Y	Inspectors discussed facility-specific safety and emergency procedures.
5. Discussed which records to be reviewed.	Y	Records that were needed for review were discussed during the opening meeting and during the closing meeting, where the facility committed to sending the records that were not produced during the time of the inspection.
6. Discussed the facility walk-through and the areas to be observed in the facility.	Y	During the opening conference R4 inspectors informed the facility that the main areas of review would be the gasoline

		storage tanks, the loading racks, the vapor control units and the PCW systems.
7. Discussed facility policy regarding photographs or video (if applicable).	Y	Region 4 inspectors indicated a digital camera would be used during the inspection. The team discussed facility policy regarding photography and videography. Inspectors indicated that copies of any videos or photographs taken at the facility would be sent to the company. A log of photographs taken at the facility is included in this report. **See Appendix A**.
8. Discussed the use of the infrared camera, TVA, PID, and any other equipment.	Y	R4 inspectors indicated that the infrared camera, TVA and 4-gas monitors were going to be used during the walk-through of the facility.
9. Discussed CBI.	Y	EPA inspectors indicated that any documents claimed to be Confidential Business Information (CBI) would be treated in accordance with regulations.
Records Reviewed at the Facility		
10. The types of records reviewed and the time period reviewed.	Y	At the time of the inspection, the R4 inspectors received the following records: a) the site plans for each of the main areas of the facility; b) a tank inventory; c) Semi-annual monthly leak detection and repair report; d) Monthly thru the hatch inspection for internal floating roof (IFR) tanks; e) monthly tank throughputs; f) VCU and VRU preventative maintenance checklist; g) Testing and Continuous Emissions Monitoring (CEMS) records for the VRU; h) Initial Notification; i) Semi-annuals Report; and j) American Petroleum Institute (API) test summaries.
Facility Walk-Through Observations		
11. The process equipment observed and the associated operational rate	Y	On July 12, 2022, at 10:49 am, the R4 inspectors began the facility walkthrough.

observed (e.g., Furnace 1 production rate was 5 lbs/hr on 1/1/15, at 2:00 pm – permit requires max rate at 6 lbs/hr). Provide the date and time the information was recorded by the inspector. Identify the permit limit (if applicable). An attachment may be used for a large amount of information.		The inspectors observed the three-bay loading rack, the VRU, 5 IFR gasoline storage tanks (21061 (61), 23274 (74), 31567 (67),31565 (65) and 31566 (66)) and PCW tank. For the VRU observations, no emissions were detected. No emissions were noted for the pressure relief valve (PRV) with the infrared camera. For loading rack observations, a leak (4% on TVA) was detected at the truck connection to the vapor return line on bay 3. For the tank observations, the TVA was used to measure the concentration of emissions from the hatch and gauge pole of Tank 65 (300 ppm on TVA). Additional emissions were detected at Tank 66's eyebrow vents, with the gauge pole reading 1600 ppm on the TVA. Emissions were also detected at eyebrow vents for Tank 61 and 67. The emissions were recorded in videos (See Attachment A for additional details). No emissions were noted for the PRV with the infrared camera. PCW Tank/Storage was observed. No detectable emissions were seen through the infrared camera.
12. The type of process parametric monitoring observed and the associated value observed (e.g., Furnace 1 flux injection rate was 200 lbs/batch at 1/1/15, at 2:00 pm – permit requires max rate at 225 lbs/batch). Provide the date and time the information was recorded by the inspector.	N/A	

Identify the permit limit (if applicable). An attachment may be used for a large amount of information.		
13. If process equipment or parametric monitoring equipment was not operating, state the reason by facility personnel why the equipment was not operating.	N/A	
14. The type of air pollution control equipment, the process equipment it is controlling, and the associated parametric monitoring value observed (e.g., baghouse pressure drop, temperature, scrubber flow rate, etc.). (For example - RTO 1 controlling furnace 1, 1,500 degrees F on 1/1/15, at 2:00 pm – permit requires 1,400 degree F or higher). Provide the date and time the information was recorded by the inspector. Identify the permit limit (if applicable). An attachment may be used for a large amount of information.	Y	The loading rack PRV had a setpoint of 18 inches of water. A VRU is used to control VOC emissions from the loading racks. A VCU is also present in case the VRU is offline. The VRU contains two carbon beds that switches once one bed becomes saturated.
15. Continuous emissions monitoring devices and values observed. (e.g., CEMS, COMs, etc.).	Y	The CEMS for the VRU was observed at 0.10% when V-2 (second carbon bed) was in operation and 0.20% when switching to V-1 (first carbon bed)

Provide the date and time the information was recorded by the inspector. Identify the permit limit (if applicable). An attachment may be used for a large amount of information.		
16. If air pollution control equipment was not operating, state the reason by facility personnel why the equipment was not operating.	N/A	
17. Capture and collection system (enclosures and hoods) observations, if applicable (e.g., the magnitude and duration of emission escaping capture from the hood).	N/A	
18. Ductwork transferring the emissions to the air pollution control device observations, if applicable (e.g., the magnitude and duration of emission escaping from the ductwork, holes or deterioration in ductwork, no deterioration observed, etc.).	N/A	
19. Any existing unpermitted emission points, new unpermitted emission points, or non-permitted construction activities observed. (if yes, describe in the comments field).	N/A	
20. Were any visible emissions observed? (if yes, identify the location and equipment).	N/A	

21. Was a Method 9 reading performed? (if yes, identify the location and equipment).	N/A	
22. Was the cause of the visible emissions investigated and the information documented?	N/A	
23. Was a Method 22 performed for visible emissions? (if yes, identify the location and equipment).	N/A	
24. Identify the cause of the visible emissions as explained by facility personnel, if applicable.	N/A	
25. Was the infrared camera used? If so, attach the video log (which includes the equipment ID, and the date and time the video was recorded) and videos to this report.	Y	See Attachment A for the video log.
26. Was the TVA used? If so, identify the equipment monitored and the results. Provide the date and time the information was recorded by the inspector. Include actual instrument readings for each piece of equipment monitored above the leak definition and/or where the infrared camera identified a release. An attachment may be used for a large amount of information.	Y	A TVA was used to monitor the loading racks and tank hatches and gauge poles. For loading rack observations, a leak (4% on TVA) was detected at the truck connection to the vapor return line on bay 3. For tanks, TVA readings of around 300ppm were observed on the hatch and gauge pole of Tank 65 and around 350ppm on the J-vent of Tank 65. A TVA reading of around 1600ppm was observed on Tank 66's gauge pole. All hatches and gauge poles are in the Normally Closed position and ppm measurement(s) were taken after gauge hatch/gauge pole(s) were opened.

27. Was the PID used? If so, identify how the PID was used and the results. Provide the date and time the information was recorded by the inspector. An attachment may be used for a large amount of information.	N	
Closing Meeting		
28. Conducted a closing meeting.	Y	A close out meeting was conducted at approximately 12:25 pm CST. The inspection team discussed findings with terminal staff.
29. Summarize any additional information needed, if applicable?	Y	The pre-fill roof inspection report for tank 61 was sent to R4 inspectors after the inspection via email.
30. Accept a declaration of CBI, if applicable?	N	Facility personnel did not declare or claim any documents as CBI.
31. Discussed observations.	Y	The R4 inspectors discussed what was seen and observed during the inspection at the closing meeting. It was noted that a copy of the infrared camera videos would be sent to the facility for their review.
32. Discussed next steps, if applicable?	Y	The R4 inspectors stated that both the infrared camera videos and inspection report will be sent to the company for the facility's review for CBI. Following this step, R4 would proceed to finalize and issue a final report.
33. Date and time inspection concluded.		The inspection concluded on July 12, 2022, at 12:57 pm.
Miscellaneous		
34. Include any additional observations, if applicable.		

EPA Investigator/Inspector Signature: BAICHEN ZHONG Digitally signed by BAICHEN ZHONG Date: 2022.09.01 16:54:42 -04'00'

EPA Supervisor Signature & Title: JASON DRESSLER Digitally signed by JASON DRESSLER Date: 2022.09.02 08:10:56 -04'00'

Jason Dressler, Chief, North Air Enforcement Section

Date Report Finalized: September 2, 2022

Attachment A – List of Videos

During the July 12, 2022, inspection, EPA Region 4 staff used an infrared camera to record equipment at the Shell Oil Products US facility located in Nashville, Tennessee. Below is a list and description of the footage.

Table 1: Videos taken during the July 12, 2022, inspection

Image Number	File Name	Date and Time	Description of Image
1	MOV_0437.mp4	7/12/2022 11:14 AM	Loading Rack Bay 3 vapor return line
2	MOV_0438.mp4	7/12/2022 11:30 AM	Northwest eyebrow vent of Tank 66 (high sensitivity)
3	MOV_0439.mp4	7/12/2022 11:30 AM	Additional video of northwest eyebrow vent of Tank 66 (normal view)
4	MOV_0440.mp4	7/12/2022 11:36 AM	Southeast eyebrow vent of Tank 67
5	MOV_0441.mp4	7/12/2022 11:47 AM	Northwest eyebrow vent of Tank 66 (normal view from bottom of tank)
6	MOV_0442.mp4	7/12/2022 11:53 AM	Northwest eyebrow vent of Tank 61
7	MOV_0443.mp4	7/12/2022 11:56 AM	Southeast eyebrow vent of Tank 61