



DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
Permit Application Analysis
A0001227

August 5, 2015

NAME OF FIRM: Sinclair Transportation Company

NAME OF FACILITY: Cheyenne Station

FACILITY LOCATION: 1500 Parsley Avenue
Cheyenne, Laramie County, Wyoming

TYPE OF OPERATION: Receipt, storage and transfer of crude oil

RESPONSIBLE OFFICIAL: Samuel Greene, Corporate Environmental Engineer

MAILING ADDRESS: 550 East South Temple
Salt Lake City, UT 84102

TELEPHONE NUMBER: (801) 524-2729

REVIEWING ENGINEER: Alicia Boltz, Air Quality Engineer

1. PURPOSE OF APPLICATION

On June 19, 2015, the Division of Air Quality received an application from Sinclair Transportation Company to modify the Cheyenne Station with the installation of one (1) 16,800 bbl external floating roof crude oil storage tank, one (1) 84,200 bbl internal floating roof crude oil storage tank and a new tank truck unloading system that includes a four (4) bay unloading rack and two (2) Lease Automatic Custody Transfer (LACT) units. The Cheyenne Station is located at 1500 Parsley Avenue, in Cheyenne, Laramie County, Wyoming.

2. PERMIT HISTORY

On April 9, 2013, Air Quality Waiver wv-14630 was issued to modify the Cheyenne Station with the installation of a new tank truck unloading system that includes a four (4) bay unloading rack and two (2) Lease Automatic Custody Transfer (LACT) units.

3. PROCESS DESCRIPTION

The Cheyenne Station includes a crude oil tank truck unloading bay that gravity feeds to a settling tank. Crude oil from the settling tank is then pumped to Tank #6 for storage. Crude oil from the Tank #6 is then pumped to the Sinclair Transportation Company (STC) pipeline for distribution to downstream refineries. Currently, the Cheyenne Station is equipped with a four (4) bay unloading rack and two (2) LACT units. In order to decrease wait times for tank trucks to unload and allow for quicker unloading, Sinclair Transportation Company is now planning to expand its operations at this facility to include installation and operation of one (1) 16,800 bbl and one (1) 84,200 bbl crude oil storage tanks, and a new tank truck unloading system that includes a four (4) bay unloading rack and two (2) Lease Automatic Custody Transfer (LACT) units. After this permitting action, the facility will have a total of eight (8) unloading bays and four (4) LACT units.

4. ESTIMATED EMISSIONS

VOC and HAP emissions from standing/working/breathing (S/W/B) losses from the one (1) 16,800 bbl and one (1) 84,200 bbl crude oil storage tanks were estimated using EPA Tanks 4.0.9d. Emissions were calculated based on an average throughput of 20,000 barrels per day for the 16,800 bbl crude oil storage tank, an average throughput of 20,000 barrels per day for the 84,200 bbl crude oil storage tank, and crude oil properties provided by Sinclair Transportation Company. Annual emissions from the one (1) 16,800 bbl and one (1) 84,200 bbl crude oil storage tanks were calculated to be 7.4 tons of VOCs and 0.25 tons of HAPs.

Equipment fugitive leak emissions for the facility were calculated using EPA’s Protocol EPA-453/R-95-107, Table 2.3 – *Marketing Terminal Average Emission Factors* - with a count of valves pump seals, flanges and connectors, assuming 100% VOC content in light liquid service. Fugitive emissions were calculated to be 0.6 tons of VOCs and 0.03 tons of HAPs.

Estimated emissions from the proposed modification are shown in Table 1.

Table 1: Cheyenne Station Emissions Summary			
Source	IMPACT ID	VOC	HAP
		tpy	tpy
Existing Emissions (wv-14630)			
Tank 6	--	5.2	0.17
Fugitives	--	0.6	0.02
Total Existing Emissions		5.8	0.19
Proposed Emissions			
Tank 6	--	5.2	0.17
16,800 bbl external floating roof crude oil storage tank	TNK001	5.3	0.18
84,200 bbl internal floating roof crude oil storage tank	TNK002	2.1	0.07
Fugitives	FUG001	1.2	0.05
Net Change		8.0	0.28
Total Facility Emissions		13.8	0.47

5. BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Per the requirements of Chapter 6 Section 2 of the Wyoming Air Quality Standards and Regulations (WAQSR), all facilities must demonstrate the use of BACT.

The 16,800 bbl crude oil storage tank is equipped with an external floating roof and the 84,200 bbl crude oil storage tank is equipped with an internal floating roof. The Division considers external and internal floating roofs meeting 40 CFR part 60, subpart Kb as representing BACT for tanks of these sizes.

6. CHAPTER 6, SECTION 3 APPLICABILITY

The Cheyenne Station is not a “major source” as defined by Chapter 6, Section 3 of the Wyoming Air Quality Standards and Regulations (WAQSR). Therefore, Sinclair Transportation Company shall obtain an operating permit in accordance with Chapter 6, Section 2 of the WAQSR.

7. PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

The Cheyenne Station is not a “major stationary source” as defined by Chapter 6, Section 4 of the WAQSR. Therefore, the Cheyenne Station is not subject to PSD review under Chapter 6, Section 4.

8. NEW SOURCE PERFORMANCE STANDARDS (NSPS)

40 CFR part 60, subpart Kb – *Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984* - applies to storage vessels with a design capacity greater than 151 m³ (950 bbl) containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 3.5 kPa (0.5 psia). The one (1) 84,200 bbl crude oil storage tank is subject to Subpart Kb due to its size.

Sinclair Transportation Company recently purchased the one (1) 16,800 bbl crude oil storage tank. Sinclair Transportation Company believes this tank is currently a grandfathered source and does not have any formal air quality permitting history. Because the 16,800 bbl crude oil storage tank has been idle for over five (5) years, it is considered a new source and subject to Subpart Kb.

9. PROPOSED PERMIT CONDITIONS

The Division proposes to issue an Air Quality Permit to Sinclair Transportation Company to modify the Cheyenne Facility with the following conditions:

1. That authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being constructed or installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rules, standards, permits or orders.
2. That all substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as conditions of this permit.
3. That a permit to operate, in accordance with Chapter 6, Section 2(a)(iii) of the WAQSR, is required after a 120 day start-up period in order to operate this facility.
4. That all notifications, reports and correspondences associated with this permit shall be submitted to the Stationary Source Compliance Program Manager, Air Quality Division, 122 West 25th Street, Cheyenne, WY 82002 and a copy shall be submitted to the District Engineer, Air Quality Division, 122 West 25th Street, Cheyenne, WY 82002. Submissions may also be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. That the date of commencement of construction of the one (1) 84,200 bbl crude oil storage tank, and crude oil unloading rack and LACT units shall be reported to the Administrator within thirty (30) days of commencement. In accordance with Chapter 6, Section 2(h) of the WAQSR, approval to construct or modify shall become invalid if construction is not commenced within twenty-four (24) months after receipt of such approval or if construction is discontinued for a period of twenty-four (24) months or more. The Administrator may extend the period based on satisfactory justification of the requested extension.

6. That written notification of the actual date of initial startup of the 16,800 bbl and 84,200 bbl crude oil storage tanks is required fifteen (15) days after startup in accordance with Chapter 6, Section 2(i)(ii) of the WAQSR.
7. That Sinclair Transportation Company shall comply with the testing and procedures under 40 CFR part 60, subpart Kb §60.113b, with the exception of extension requests and other notifications to the Administrator, for Tank #6. Records of inspections and repairs shall be kept for a period of five (5) years.
8. That Sinclair Transportation Company shall comply with all applicable requirements of 40 CFR part 60, subpart Kb for the 16,800 bbl crude oil storage tank (TNK001) and the 84,200 bbl crude oil storage tank (TNK002).
9. Effective upon issuance, this permit shall supersede Air Quality Waiver wv-14630 for the Cheyenne Station.