



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2682A
Plant ID No.: 033-00155
Applicant: Appalachian Oil Products, Inc. (Appalachian)
Facility Name: Sun Valley Station
Location: Clarksburg, Harrison County
SIC Code: 5171 - Petroleum Bulk Station and Terminals
Application Type: Class II Administrative Update
Received Date: June 15, 2016
Engineer Assigned: John Legg
Fee Amount: \$1,300.00
Date Received: June 17, 2016
Complete Date: July 26, 2016 (Date Affidavit of Publication received at DAQ)
Applicant Ad Date: June 18, 2016
DAQ Ad Date: No Ad Required
Newspaper: *The Exponent Telegram*
UTM's: Easting: 550.20 km Northing: 4347.88 km Zone: 17
Description: 1) Increase the annual throughput limit for the crude oil and brine storage tank T01; and 2) increase the daily limit on the number of tank trucks that can be loaded from storage tank T01.

DESCRIPTION OF PROCESS

This process description came from the previous permit (R13-2682):

The crude oil and brine storage tank/unloading facility consists of the following equipment:

- 147,000 gallon (3,500 barrel @ 42 gal/barrel) tank (T01) for crude oil and brine storage.
- 2 -tank truck crude oil and brine unloading systems
- A pump to transfer the oil and brine from the storage tank to tank trucks
- A small building for oil testing

Crude oil and brine are pumped from small oil delivery trucks into the storage tank and then pumped from the storage tank into 8,000 gallon tank trucks for

transfer off-site. Emissions from the crude oil and brine storage tank are controlled by the tank's internal floating roof (IFR).

Table 1: Emission Unit Data Sheet for Crude Oil and Brine Storage Tank (T01) Located at Appalachian's Sun Valley Station, Clarksburg, WV.	
Bulk Storage Area Name	Sun Valley Station
Tank Equipment ID No.	T01
Emission Point ID No.	AV2 (Atmospheric Vent 2)
Date of Commencement of Construction	2006
Description of Tank Modification	Increase in crude oil and brine annual throughput.
Design Capacity	3,500 barrel (bbl)
Tank Internal Diameter (ft)	30
Tank Internal Height (ft)	10
Maximum Liquid Height (ft)	28
Average Liquid Height (ft)	10
Maximum Vapor Space Height (ft)	Unknown
Average Vapor Space Height (ft)	Unknown
Nominal Capacity (gallon) (Working Volume)	147,000
Maximum annual throughput (gal/yr)	30,660,000
Maximum daily throughput (gal/day)	84,000
Number of Turnovers per year	208.57
Maximum tank fill rate (gal/min)	600
Tank fill method	Submerged
Type of Tank	Fixed Roof; Vertical; Cone Roof; Internal Floating Roof (self-supporting)

Table 2: Emission Unit Data Sheet for Bulk Liquid Transfer Operations at Appalachian's Sun Valley Station, Clarksburg, WV.	
ID No.	LA1 (Loadout Area 1)
Emission Point ID No.	TH1 (Tank Truck Hatch 1)

Table 2: Emission Unit Data Sheet for Bulk Liquid Transfer Operations at Appalachian's Sun Valley Station, Clarksburg, WV.	
Type of cargo vessels accommodate at this rack:	Tank Trucks
Number of pumps:	One (1)
Number of liquids loaded:	One (1)
Maximum number of tank truck loading at one time:	One (1)
Describe cleaning location, compounds and procedure for tank trucks using this rack:	No cleaning. Tank Trucks are in dedicated service.
Are cargo vessels pressure tested for leaks at this or any other location?	Yes, vessel pressure tested in accordance with DOT requirements.
Projected Maximum Operating Schedule:	24 hr/day; 5 day/wk; 13 wk/quarter; 52 wk/yr
Bulk Liquid Data	
Pump ID No.	P01
Liquid Name	Crude Oil
Maximum daily throughput	84,000 gal/day
Maximum annual throughput	30,660,000 gal/yr
Loading Method	Bottom Fill
Max. Fill Rate (gal/min)	600
Average Fill Time (min/loading)	≈20
Max. Bulk Liquid Temperature (°F)	55.66
True Vapor Pressure	0.5922 (@ maximum bulk liquid temperature of 55.66 °F)
Cargo Vessel Condition	Uncleaned (dedicated service)
Control Equipment or Method	None
Maximum Emission Rate	1.17 lb/hr - Loading 5.12 ton/yr (10,230.85 lb/yr)

Proposed Change

R13-2682 limits the annual throughput of the crude oil and brine storage tank to 10,400,000 gallons per year⁽¹⁾ and the daily load out to five (5) tank trucks per day (per

R13-2682, Attachment L, "Emissions Unit Data Sheet Storage Tanks" and Attachment N, "Supporting Emissions Calculations"). The company proposes:

- to increase annual throughput to 30,660,000 gal/yr ⁽²⁾, and
- to remove the daily limit on trucks loaded.

Note: The writer agrees to increase the limit on the number of trucks to be loaded, but does not agree to remove the limit. See attached email discussion given in Attachment 2 to this evaluation.

New daily trucks

Loaded Limit = 30.66 MM gal/yr/(365 day/yr)/(8,000 gal/tank truck)
 = 10.5 loads/day
 ≈ 11 loads/day

(1) 10.4 MM gal/yr / 365 day/yr = 28,500 gal/day;
 10.4 MM gal/yr / 365 day/yr / 42 gal/barrel = 680 barrels/day;
 10.4 MM gal/yr / 365 day/yr / 8,000 gal/truck ≈ 3.6 tank trucks/day;
 10.4 MM gal/yr / 42 gal/barrel ≈ 247,500 barrels/yr;
 10.4 MM gal/yr / 147,000 gal/truck turnover ≈ 71 tank turnovers/yr.
 10.4 MM gal/yr / 1,300 hr/yr ^(**) ≈ 8,000 gal/hr pump rate to tank truck

(**) Hours in one year spent pumping from storage tank to tank truck per the evaluation (per section entitled "Estimate by Emissions by Reviewing Engineer") for permit R13-2682.

(2) 30.66 MM gal/yr / 365 day/yr = 84,000 gal/day
 30.66 MM gal/yr / 365 day/yr / 42 gal/barrel = 2,000 barrels/day;
 30.66 MM gal/yr / 365 day/yr / 8,000 gal/truck ≈ 10.5 tank trucks/day;
 30.66 MM gal/yr / 42 gal/barrel = 730,000 barrels/yr;
 30.66 MM gal/yr / 147,000 gal/truck turnover ≈ 209 tank turnovers/yr;
 30.66 MM gal/yr / 8,000 gal/truck ≈ 3,833 trucks/yr
 30.66 MM gal/yr / 36,000 gal/hr ^(**) ≈ 852 hr/yr spent pumping from storage tank to tank truck

(**) The maximum pumping rate for the loading pump given on pages 51 and 65 of permit application R13-2683A.

MSDS

Appalachian submitted an Material Safety Data Sheet (MSDS) as part of their application (Attachment H, pages 20 through 34) for Petroleum Crude Oil Solution which lists the use of the material as being a fuel.

The MSDS lists the following composition information:

Table 3: Component Information for Petroleum Crude Oil Solution.		
Component	CAS No.	% by Weight
Crude Oil	8002-05-9	≤100%
n-decane	872-05-9	4 - 10%
n-pentane	109-66-0	2 - 7%
n-hexane	110-054-3 (HAP)	1 - 5%
n-heptane	142-82-5	2 - 5%
octane	111-65-9	1 - 5%
nonane	111-84-2	1 - 5%
n-butane	106-97-8	1 - 5%
methylcyclohexane	108-87-2	1 - 4%
toluene	108-88-3 (HAP)	≤2%
1,2,4-trimethylbenzene	95-63-6	≤2%
benzene	71-43-2 (HAP)	≤1%

Table 4: Physical and Chemical Properties of Crude Oil.	
Physical State	Liquid
Appearance	Viscous liquid/semi-solid
Color	Black; Yellow; Dark green
Odor	Hydrocarbon
Boiling Point	100 to 1,000 °F
Flash Point	60 - 200 °F
Auto-ignition temperature	500 °F
Vapor Pressure	≤ 724 mm Hg (at 100 °F) (13.9 psi)
Relative vapor density at 20 °C	1.5 -3 (Air = 1)
Relative density	0.7 - 1
Density	6.6 - 8.2 (pounds/gallon)

SITE INSPECTION

The writer did not visit the site for this update, however, the site is routinely inspected by DAQ's Enforcement Group.

Karl Dettinger, Enforcement Inspector out of DAQ's North Central Regional Office (Fairmont, WV) last inspected the facility on April 22, 2015 at which time the facility was found to be in compliance and was given the status code of 30. Database comments from that inspection:

Full Compliance Evaluation (FCE) inspection was performed. The Tank was observed (we looked at the internal floating roof from the roof of the tank). Records were reviewed. Three (3) photographs were taken.

Directions to the facility as given in the update application are as follows:

From Charleston, take Interstate 79 North to Exit 119. Turn left onto US Route 50 West. Continue to intersection to Route 98. Turn left onto Route 98. At the first intersection bear right onto Sun Valley Road (Harrison County 50/39). Follow Sun Valley Road to the facility on the left just before Harrison Rural Electrification Association facility.

Jill Harris, the permit engineer who wrote permit R13-2682, had the following comments about the site:

The site was located near the edge of the Sun Valley Road. There are several residences near the site. The closest residences is located directly across the road approximately 100 feet from the tank.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The writer reviewed Appalachian's emission calculation and found the to be credible.

VOC and HAP Emissions

Emissions from the facility are VOC and HAP emissions.

The Potential to Emit (PTE) VOCs after this update is adopted is estimated at 1.57 lb/hr and 6.87 ton/yr.

Appalachian estimated HAP composition to be 5.3% by weight of VOC emissions (HAP emission of 0.08 lb/hr and 0.36 ton/yr). The source for this estimate is from:

The Emission Inventory Improvement Program, Volume III: Chapter 11: "Gasoline Marketing (Stage I and Stage II)," Revised Final 1/2001, Table 11.3-2: "HAP Percent of VOC Emissions," Source: EPA, 1999.

Source of Emissions

Emissions are primarily due to crude oil and brine storage tank breathing losses and tank truck loading (from storage tank) losses.

Working losses from the smaller delivery trucks pumping crude oil and brine into the tank are considered to be negligible due to the emissions control afforded by the storage tank's internal floating roof.

Loading losses from tank trucks while pumping out of the crude oil and brine storage tank were estimated using methods set forth in the USEPA's AP-42, 5.2, "Transportation and Marketing of Petroleum Liquids," specifically equation (1).

Annual crude oil and brine storage tank losses were estimated using USEPA's software calculation tool: Tanks (version 4.0 for R13-2682; version 4.0.9d for R13-2682A).

Hourly emissions losses for R13-2682A were calculated on an operating schedule of 8,760 hours per year. Table 5 shows the emissions calculated for the facility.

Table 5: Emission from Appalachian's Crude Oil and Brine Storage Tank Facility.

Emission Point ID No.	Emission Unit ID No.	Source ID No.	Pollutant	Emission Rate			
				Old - R13-2682 (at a 10.40 MM/yr Storage Tank Throughput)		New - R13-2682A (at a 30.66 MM/yr Storage Tank Throughput)	
				(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
AV2	T01	Storage Tank	VOC	— ⁽¹⁾	0.32	0.08 ⁽²⁾	0.36 ⁽²⁾
TH1	LA1	Load Out	VOC	8.79 ⁽⁴⁾	5.71 ⁽³⁾	1.17	5.12
FUG ⁽⁷⁾		Fugitive Emissions (Components, i.e., valves, flanges, etc.)	VOC	— ⁽⁵⁾	— ⁽⁵⁾	0.32	1.39
Total			VOC	8.79	6.03	1.57	6.87
Change in Emissions			VOC	(-7.22)	lb/hr	ton/yr	+0.84 ⁽⁶⁾

(1) Not included in totals for R13-2682. Would be ≈0.07 lb/hr if annual emissions of 0.32 ton/yr had been divided by 8,760 hr/yr.

(2) Losses calculated using EPA Tanks 4.0.9d, with 65% of the throughput as Oil (Reid Vapor Pressure = 5) and 35% water. No flashing emissions are expected because the product (oil and brine) is trucked into the facility. Due to variable short-term emission rates, the average lb/hr rate based on annual

Source of Emissions

Emissions are primarily due to crude oil and brine storage tank breathing losses and tank truck loading (from storage tank) losses.

Working losses from the smaller delivery trucks pumping crude oil and brine into the tank are considered to be negligible due to the emissions control afforded by the storage tank's internal floating roof.

Loading losses from tank trucks while pumping out of the crude oil and brine storage tank were estimated using methods set forth in the USEPA's AP-42, 5.2, "Transportation and Marketing of Petroleum Liquids," specifically equation (1).

Annual crude oil and brine storage tank losses were estimated using USEPA's software calculation tool: Tanks (version 4.0 for R13-2682; version 4.0.9d for R13-2682A).

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				(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
AV2	T01	Storage Tank	VOC	— ⁽¹⁾	0.32	0.08 ⁽²⁾	0.36 ⁽²⁾
TH1	LA1	Load Out	VOC	8.79 ⁽⁴⁾	5.71 ⁽³⁾	1.17	5.12
FUG ⁽⁷⁾		Fugitive Emissions (Components, i.e., valves, flanges, etc.)	VOC	0.4	1.74	0.32	1.39
Total			VOC	8.79	6.03	1.57	6.87
Change in Emissions			VOC	(-7.22)	lb/hr	ton/yr	+0.84 ⁽⁶⁾

→ 0.36
 - 0.32

 .04

 5.12
 - 1.74

 3.38
 + .04

 3.42

(1) Not included in totals for R13-2682. Would be ≈0.07 lb/hr if annual emissions of 0.32 ton/yr had been divided by 8,760 hr/yr.

(2) Losses calculated using EPA Tanks 4.0.9d, with 65% of the throughput as Oil (Reid Vapor Pressure = 5) and 35% water. No flashing emissions are expected because the product (oil and brine) is trucked into the facility. Due to variable short-term emission rates, the average lb/hr rate based on annual

emissions is shown for reference purposes only. Hourly emissions based on dividing annual emissions by 8,760 hr/yr.

- (3) Using the same equation as was used to calculate load out emissions for R13-2682A, annual emissions for R13-2682 would have been 1.74 ton/yr instead of 5.71 ton/yr.
- (4) Hourly load out emissions based on dividing annual load out emissions by 1,300 hr/yr, the number of hours during which the storage tank was being pumped to tank trucks. The hourly load out emissions rate for R13-2682 would have been 0.4 lb/hr if the annual load out emission rate of 1.74 ton/yr calculated in footnote (3) above had been divided by 8,760 hr/yr as in R13-2682A.
- (5) Fugitive emissions were not given (calculate?) in the evaluation for R13-2682.
- (6) Increase in VOC's of +0.84 ton/yr as advertised in newspaper (on 6/18/2016). If R13-2682 had been calculated like R13-2682A, the increase in VOC's would have been approximately +3.42 ton/yr.
- (7) Fugitive Emissions from components such as valves, flanges, etc. are not limited in the permit.

REGULATORY APPLICABILITY

The following State and Federal Regulations are applicable to the 147,000 gallon crude oil and brine storage tank and unloading system.

- 45CSR13 - Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

The purposes of this rule is to set forth the procedures for stationary source reporting, and the criteria for obtaining a permit to construct and operate a new stationary source which is not a major stationary source, to modify a non-major stationary source, to make modifications which are not major modification to an existing major stationary source and to relocate non-major stationary sources within the state of West Virginia.

Appalachian is proposing to increase the throughput of crude oil and brine solution to the storage tank to 30,660,000 gal/yr (from 10,400,000 gal/yr) which will result in an increase in the potential to emit (PTE) for the facility of 0.84 ton/yr of VOCs when compared with the PTE calculated for the facility in the previous permit, R13-2682.

Appalachian submitted an application (R13-2682A) for a Class II Administrative Update Permit on June 15, 2016. The facility published a Class I Legal Advertisement in *The Exponent/Telegram* on June 18, 2016. The legal affidavit of publication arrived at the DAQ on July 26, 2016 at which time the application was deemed to be complete.

- 45CSR16 - Standard of Performance for New Stationary Sources Pursuant to 40 CFR Part 60

emissions is shown for reference purposes only. Hourly emissions based on dividing annual emissions by 8,760 hr/yr.

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- (4) Hourly load out emissions based on dividing annual load out emissions by 1,300 hr/yr, the number of hours during which the storage tank was being pumped to tank trucks. The hourly load out emissions rate for R13-2682 would have been 0.4 lb/hr if the annual load out emission rate of 1.74 ton/yr calculated in footnote (3) above had been divided by 8,760 hr/yr as in R13-2682A.
- (5) Fugitive emissions were not given (calculate?) in the evaluation for R13-2682.
- (6) Increase in VOC's of +0.84 ton/yr as advertised in newspaper (on 6/18/2016). If R13-2682 had been calculated like R13-2682A, the increase in VOC's would have been approximately +3.42 ton/yr.
- (7) Fugitive Emissions from components such as valves, flanges, etc. are not limited in the permit.

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Appalachian is proposing to increase the throughput of crude oil and brine solution to the storage tank to 30,660,000 gal/yr (from 10,400,000 gal/yr) which will result in an increase in the potential to emit (PTE) for the facility of 0.84 ton/yr of VOCs when compared with the PTE calculated for the facility in the previous permit, R13-2682.

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- 45CSR16 - Standard of Performance for New Stationary Sources Pursuant to 40 CFR Part 60

Not change from last time/R13-2682.

This rule establishes and adopts standards of performance for new stationary sources promulgated by the USEPA pursuant to section 111(b) of the federal Clean Air Act, as amended (CAA). This rule codified general procedures criteria to implement the standards of performance for new stationary sources set forth in 40 CFR Part 60. The Secretary hereby adopts these standards by reference. The Secretary also adopts associated reference methods, performance specifications and other test methods which are appended to these standards.

The facility is proposing to install a 147,000 gallon crude oil and brine storage tank. The facility will be subject to the requirements of 40 CFR 60 Subpart Kb.

40 CFR 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

No change from last time/R13-2682.

The affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) (19,812.9 gallons) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. This subpart does not apply to storage vessels with a capacity greater than or equal to 151 cubic meters (m^3) (39,889.98 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) (0.51 psi) or with a capacity greater than or equal to 75 m^3 (19,812.9 gallons) but less than 151 m^3 (39,889.98 gallons) storing a liquid with a maximum true vapor pressure less than 15.0 kPa (2.18 psi).

The proposed tank is 147,000 gallons, storing crude oil and brine at a maximum true vapor pressure of 2.3 psia. Therefore, the facility will be subject to the standards of VOC control, testing, reporting and recording requirements set forth in this subpart for a fixed roof in combination with an internal floating roof.

45CSR30 - Requirements for Operating Permits

No change since last time/R13-2682A.

This source, the 147,000 gallon storage tank, meets the definition of this rule as set forth in section 45CSR30-2.26.b.44. This defines a major source as any stationary source category, which as of August 7, 1980 is being regulated under section 111 or 112 of the Clean Air Act. This source is regulated under section 111 of the Clean Air Act. Since the source has the potential to emit less than 100 tons per year of any regulated air pollutant (NO_x, CO, PM₁₀, VOC, Pb), the facility will be a nonmajor source deferred from submitting a Title V application. However, the facility will be required to submit fees in accordance with this rule.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

No change since last time/R13-2682.

The permittee is proposing to emit only VOCs and HAPs from the facility. There are no non-criteria regulated air pollutants emitted from the source.

AIR QUALITY IMPACT ANALYSIS

No change since last time/R13-2682.

No modeling analysis was conducted for this update. The facility should not have an adverse impact on the environment.

The facility is located in an attainment area for all criteria pollutants (Nox, CO, Ozone, PM, SO₂, and Pb). It is considered a minor source under PSD (45CSR14) definitions and meets all state and federal requirements and should maintain the attainment status in the area.

MONITORING OF OPERATIONS

No change since last time/R13-2682.

The facility shall continue to monitor the applicable requirements set forth in 40 CFR 60 Subpart Kb.

The facility shall continue to monitor the throughput of crude oil and brine in the tank and the number of trucks loaded per day.

CHANGES MADE TO R13-2682

See Attachment 1 to this evaluation for a compare file detailing the changes made to R13-2682 to arrived R13-2682A.

RECOMMENDATION TO DIRECTOR

Permit application R13-2682A, submitted by Appalachian Oil Purchasers, Inc., is to:

- 1) increase the annual throughput limit for storage tank T01; and
- 2) increase the daily limit on the number of tank trucks that can be loaded from storage tank T01.

The above increases are proposed for the permittee's Sun Valley Station located in Clarksburg, Harrison County, WV. The application has been reviewed and was determined to meet all applicable requirements, and is therefore, recommended for approval.



John Legg
Permit Writer

September 2, 2016

Date

Attachment 1

Compare File

Comparing Changes Made to R13-2682 to Arrived at R13-2682A

Appalachian Oil Purchasers, Inc.

Sun Valley Station

Facility ID No.: 033-00155

Application No. R13-2682A

WordPerfect Document Compare Summary

Original document: Q:\AIR_QUALITY\J_LEGG\Appalachian Oil Purchasers, Inc\033-00155_PERM_13-2682.wpd

Revised document: Q:\AIR_QUALITY\J_LEGG\Appalachian Oil Purchasers, Inc\033-00155_PERM_13-2682A.wpd

Deletions are shown with the following attributes and color:

~~Strikeout~~, **Blue** RGB(0,0,255).

Deleted text is shown as full text.

Insertions are shown with the following attributes and color:

Double Underline, **Redline**, **Red** RGB(255,0,0).

The document was marked with 39 Deletions, 47 Insertions, 0 Moves.

West Virginia Department of Environmental Protection

Division of Air Quality

Earl Ray Tomblin
Governor

~~Stephanie R. Randy C.~~
~~Fimmermeyer Hujman~~
Cabinet Secretary

Permit to Construct Update



R13-2682A

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
Appalachian Oil Purchasers, Inc.
Sun Valley Station
033-00155

John A. William F. Benedict Durham
Director

Fact Sheet R13-2682A
Appalachian Oil Purchasers, Inc.
Sun Valley Station

Issued: ~~November 9, 2006~~ August 29, 2006 • Effective: ~~November 9, 2006~~ 2016

Facility Location: Clarksburg, Harrison County, West Virginia

Mailing Address: ~~P.O. 2017 SR 821, Box 430, Frazeyburg 21A~~
Marietta, OH 43822-0430 45750

Facility Description: Crude ~~oil/brine~~ oil and brine storage tank

SIC Codes: ~~5171~~ 424710 - Petroleum Bulk Stations and Terminals

UTM Coordinates: 550.20 km Easting • ~~4347~~ 4,347.88 km Northing • Zone 17

Lat/Long Coordinates: Latitude: 39.281429 Longitude: -80.416114

Permit Type: ~~Construction~~ Class II Administrative Update

Description of Change:

Construction of ~~Increase: 1) the throughput limits for~~ a crude oil/brine storage tank ~~and 2) increase the daily limit on the number of trucks that can be loaded.~~

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

This permit does not affect 45CSR30 applicability, the source is a nonmajor source subject to 45CSR30.

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1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
LA1	TH1	Crude Oil/Brine Oil and <u>Brine</u> Load Out	2006	1030,400 600,000 gal/yr	None
T01	AV2	Crude Oil/Brine Oil and <u>Brine Storage</u> Tank	2006	147,000 gal	None

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NAAQS	National Ambient Air Quality Standards
CBI	Confidential Business Information	NESHAPS	National Emissions Standards for Hazardous Air Pollutants
CEM	Continuous Emission Monitor	NO_x	Nitrogen Oxides
CES	Certified Emission Statement	NSPS	New Source Performance Standards
C.F.R. or CFR	Code of Federal Regulations	PM	Particulate Matter
CO	Carbon Monoxide	PM_{2.5}	Particulate Matter less than 2.5µm in diameter
C.S.R. or CSR	Codes of State Rules	PM₁₀	Particulate Matter less than 10µm in diameter
DAQ	Division of Air Quality	Ppb	Pounds per Batch
DEP	Department of Environmental Protection	pph	Pounds per Hour
dscm	Dry Standard Cubic Meter	ppm	Parts per Million
FOIA	Freedom of Information Act	Ppmv or ppmv	Parts per million by volume
HAP	Hazardous Air Pollutant	PSD	Prevention of Significant Deterioration
HON	Hazardous Organic NESHAP	psi	Pounds per Square Inch
HP	Horsepower	SIC	Standard Industrial Classification
lbs/hr	Pounds per Hour	SIP	State Implementation Plan
LDAR	Leak Detection and Repair	SO₂	Sulfur Dioxide
M	Thousand	TAP	Toxic Air Pollutant
MACT	Maximum Achievable Control Technology	TPY	Tons per Year
MDHI	Maximum Design Heat Input	TRS	Total Reduced Sulfur
MM	Million	TSP	Total Suspended Particulate
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour		
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour		
NA	Not Applicable		

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USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquids

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

- 2.4.1. This permit **supersedes and replaces previously issued Permit R13-2682. This permit** shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Applications R13-2682, R13-2682A and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to; [45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

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The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10. Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of

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this permit;

- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are not met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,
 - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§15]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

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3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.

[45CSR§13-10.5.]

3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.

[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.

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- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(~~15~~14-15) and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. State-Enforceable only.]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that

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states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

Associate Director
Office of Air Enforcement and Permits Review
Compliance Assistance
(3AP123AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.4.2. In accordance with 45CSR30 – Operating Permit Program, enclosed with this permit is a Certified Emissions Statement (CES) Invoice, from the date of initial startup through the following June 30. Said invoice and the appropriate fee shall be submitted to this office no later than 30 days prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with the Section 4.5 of 45CSR22. A copy of this schedule may be found attached to the Certified Emissions Statement (CES) Invoice.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon

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the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

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- 4.1.1. The 147,000 gallon crude oil/brine tank shall be constructed with a fixed roof in combination with an internal floating roof meeting the following specifications:
- (a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
 - (b) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof.
 - (i) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.
 - (ii) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
 - (iii) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weight levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
 - (c) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
 - (d) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
 - (e) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
 - (f) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
 - (g) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well.

The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

- (h) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
- (i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

[40CFR 60.112b(a)(1)(i)-(ix) and 45CSR16] (T01)

- 4.1.2. Emissions from the Crude Oil/Brine Load Out (Equipment ID No. LA1) and Storage Tank (Equipment ID No. T01) shall not exceed the emissions limitations listed in Table 4.1.2.

Table 4.1.2. Maximum Allowable VOC Emissions

Equipment ID No.	Emission Point ID No.	Pollutant	Maximum Emission Rate	
			lb/hr	ton/yr
LA1	TH1	VOC	8.79 ⁰² ₍₁₎	5.71 ¹² ₍₁₎
T01	AV2	VOC	10.40 ⁰⁸ ₍₂₎	0.32 ³⁶ ₍₂₎

(1) Based on loading 30.66 MM gallons of crude oil and brine in 1,278 hours. This is the same as being able to load an 8,000 gallon tank truck in 20 minutes, or pumping from the storage tank at an average rate of 400 gal/hr.

(2) Based on the storage tank operating 8,760 hr/yr.

- 4.1.3. The facility shall not load more than ~~five~~eleven (~~5~~11) tanker trucks per day.
- 4.1.4. The daily and yearly throughput of crude oil/brine in the Loadout Area 1 (Equipment ID No. LA1) shall not exceed ~~40~~88,000 gallons per day and ~~10~~30,~~640~~660,000 gallons per year.
- 4.1.5. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

4.2. Monitoring Requirements

[Reserved]

4.3. Testing Requirements

- 4.3.1. After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:
- (a) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
 - (b) For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
 - (c) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):
 - (i) Visually inspect the vessel as specified in paragraph §60.113b(a)(4) of this section at least every 5 years; or
 - (ii) Visually inspect the vessel as specified in paragraph §60.113b(a)(2) of this section.
 - (d) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in 40 CFR 60.113(a)(2) and §60.113(a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph §60.113(a)(3)(i) of this section.

[40 CFR 60.133b(a)(1)-(a)(4) and 45CSR16] (T01)

4.4. Recordkeeping Requirements

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
 - f. Steps taken to correct the malfunction.
 - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.
- (a) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
 - (b) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
 - (c) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

[40 CFR 60.115b(a)(2), (a)(3), (a)(4) and 45CSR16] (T01)

- 4.4.5. The owner or operator of each storage vessel as specified in 40 C.F.R. § 60.112b(a) shall keep records and furnish reports as required by 40 C.F.R. § 60.115b paragraph (a). The owner or operator shall keep copies of all reports and records required by this section, except for the record required by 40 C.F.R. § 60.115b(c)(1), for at least 2 years. The record required by 40 C.F.R. § 60.115b (c)(1) will be kept for the life of the control equipment. **[40 CFR 60.115b(a) and 45CSR16] (T01)**
- 4.4.6. (a) The owner or operator shall keep copies of all records required by 40 C.F.R. Part 60 Subpart Kb, except for the record required by 60.116b(b) of this section, for at least 2 years. The record required by 60.116(b) of this section will be kept for the life of the source.
- (b) The owner or operator of each storage vessel as specified in 40 C.F.R. § 60.110b(a) shall keep readily accessible records showing the dimension and an analysis showing the capacity of the storage vessel.
- (c) Except as provided in 60.116b(f) and 60.116b(g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with

a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

- (d) Except as provided in 60.116b(g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.
- (e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.
 - (1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
 - (2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
 - (i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference -- see § 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).
 - (ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

[40 C.F.R. § 60.116b(a), and 45CSR§16-2.1]

- 4.4.8. The permittee shall keep monthly records of the number of tanker trucks loaded per day, the maximum daily throughput, and the maximum yearly throughput. Compliance with the annual limits shall be determined using rolling yearly totals. A rolling yearly total shall mean the sum of the emissions at any given time for the previous twelve (12) consecutive months. These records shall be maintained on-site for a period of five (5) years and certified records shall be made available to the Director of

Air Quality or his/her duly authorized representative upon request.

4.5. Reporting Requirements

- 4.5.1. The permittee shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 60.113b(a)(1) and 60.113b(a)(4) of this 40 CFR 60 Subpart Kb to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph 60.113b(a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

[40 CFR 60.113b(a)(5) and 45CSR16] (T01)

- 4.5.2. After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specification of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

[40 CFR 60.115b(a)(1) and 45CSR16] (T01)

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name and Title _____
(please print or type) Name Title

Telephone No. _____ Fax No. _____

¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.

Attachment 2

Email Discussion on # of Trucks Loaded Out in a Day

Appalachian Oil Purchasers, Inc.

Sun Valley Station

Facility ID No.: 033-00155

Application No. R13-2682A

**Fact Sheet R13-2682A
Appalachian Oil Purchasers, Inc.
Sun Valley Station**

From: Legg, John C
Sent: Friday, September 02, 2016 3:30 PM
To: 'Brandi Lowry' <Brandi.Lowry@flatrockenergy.net>
Cc: McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>
Subject: RE: Draft Permit - DAQ Air Permit R13-2682A - Appalachian Oil Purchasers, Inc. (033-00155); Sun Valley Station; Clarksburg, Harrison County; WV

9/2/16

Brandi,

The emission limits set in the permit are both short term and long term. The conditions are to ensure the source complies with both lb/hr and TPY emission limits. An annualized average for number of trucks per day is not acceptable. The source could have very significant short term emissions that could cause or contribute to a violation of the Ozone standard.

John

From: Brandi Lowry [mailto:Brandi.Lowry@flatrockenergy.net]
Sent: Friday, September 02, 2016 12:39 PM
To: Legg, John C <John.C.Legg@wv.gov>
Cc: McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>
Subject: RE: Draft Permit - DAQ Air Permit R13-2682A - Appalachian Oil Purchasers, Inc. (033-00155); Sun Valley Station; Clarksburg, Harrison County; WV

9/2/16

Thanks much for the response and the info. I completely understand the need for some kind of documentation/compliance check on the throughput and the loading emissions. What I'm not completely sure about is why the daily loadout would need to be specifically limited to 11 instead of only counted for the annual limit. Would it be possible to make the 11 trucks per day limit an annual rolling average since it's being used to show compliance with a 12-month rolling total limit?

Thanks,
Brandi

From: Legg, John C
Sent: Friday, September 02, 2016 10:46 AM
To: 'Brandi Lowry' <Brandi.Lowry@flatrockenergy.net>
Cc: McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>
Subject: RE: Draft Permit - DAQ Air Permit R13-2682A - Appalachian Oil Purchasers, Inc. (033-00155); Sun Valley Station; Clarksburg, Harrison County; WV

9/2/16

Brandi,

Thank you for your time spent reviewing the draft permit.

History - The first permit application set the maximum number of trucks that could be loaded at 5 trucks/day. See permit application R13-2682; Attachment L; the Emission Unit Data Sheet for Storage TankT01; General Information; Entry 7C

Counting the number of trucks that are loaded out in a day is an easy, simple parameter DAQ can use to gauge emissions from the facility.

[As you know loading losses are the largest source of emissions from the facility (estimated at 5.12 ton/yr); tank losses are small (estimated at only 0.36 ton/yr); And the only other losses associated with the facility are fugitive emissions from leaking valves, flanges, etc., (estimated at only 1.39 ton/yr) and which are never limited in a permit.]

It's logical to count the number of trucks loaded out in a day's time, information that a company must keep in order to run a business. And when coupled with information on the amount of material loaded into the tank, it provides an easy material balance check.

Also, the facility's loadout pump rate (600 gal/min) provides a huge range for the possible number of shipments that can be loaded out in a day's time. The first application set the loadout rate at 5 trucks per day or 40,000 gal/day. The second (and current) application set the rate at 84,000 gal/day (approximately 11 truck loadouts at day). And at the maximum loadout rate, 864,000 gal/day of material or 108 trucks per day could possibly be loaded out from of the facility.

Hope the above statements provides a better understanding as to why the DAQ wants to continue counting the daily number of trucks loaded from the facility.

John

From: Brandi Lowry [<mailto:Brandi.Lowry@flatrockenergy.net>]

Sent: Wednesday, August 31, 2016 6:10 PM

To: Legg, John C <John.C.Legg@wv.gov>

Subject: RE: Draft Permit - DAQ Air Permit R13-2682A - Appalachian Oil Purchasers, Inc. (033-00155); Sun Valley Station; Clarksburg, Harrison County; WV

8/31/16

Hello,

Could you please explain the purpose of keeping a daily limit on the number of trucks loaded? The overall throughput is an annual limit, so what is the background on limiting the trucks loaded per day? It is not a requirement we see for other oil/condensate handling facilities, so any guidance would be appreciated.

Thanks much for your help on this topic.

Thanks,
Brandi