



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

Ref: 8P-AR

James (Mike) Day, Vice President  
Van Hook Crude Terminal, LLC  
9590 New Decade Drive  
Pasadena, Texas 77507

Re: Van Hook Crude Terminal, LLC (Van Hook)  
Van Hook Crude Terminal  
Permit #SMNSR-TAT-000044-2012.001  
Final Synthetic Minor NSR Permit

Dear Mr. Day:

The Environmental Protection Agency, Region 8 (EPA) has completed its review of Van Hook's request to obtain a synthetic minor New Source Review (NSR) permit pursuant to 40 CFR Part 49 for the Van Hook Crude Terminal. Based on the information submitted in Van Hook's application and the comments received during the public comment period, the EPA hereby issues the enclosed permit to construct. According to 40 CFR 49.159(a), this permit will become effective 30 days after notice of the final permit action. Therefore, the final permit will become effective on September 1, 2012.

A 30-day public comment period was held from March 23, 2012 to April 23, 2012, and resulted in general comments from residents of New Town, North Dakota, regarding the possible increase in fugitive dust emissions due to the rapid oil and gas production development in the area. The comments were not specific to any conditions of this permit. The EPA Region 8 reviewed the comments received and provided responses in Enclosure 1, "Response to Comments Document." These comments did result in changes to the requirements of the proposed permit for this facility. Section E - **Requirements for Minimizing Fugitive Dust** was added to the final permit.

Pursuant to 40 CFR 49.159(d), 30 days after the final permit decision has been issued, any person who commented on the specific terms and conditions of the draft permit, may petition the Environmental Appeals Board to review any term or condition of the permit. Any person who failed to comment on the specific terms and conditions of this permit may petition for administrative review only to the extent that the changes from the draft to the final permit or other new grounds were not reasonably ascertainable during the public comment period. The 30-day period within which a person may request review begins with this notice of the final permit decision. If an administrative review of the final permit is requested, the specific terms and conditions of the permit that are the subject of the request for review must be stayed.

If you have any questions concerning the enclosed permit, please contact Kathleen Paser of my staff at (303) 312-6526.

Sincerely,

A handwritten signature in black ink, appearing to read "Callie A. Videtich", with a long horizontal flourish extending to the right.

Callie A. Videtich  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

Enclosure

cc:

Joe Gillies, Environmental Director, Three Affiliated Tribes  
Fred Fox, Energy Director, Three Affiliated Tribes  
Ed Liebsch, HDR, Inc.

## **Response to Comments**

Comment from gillvg: (direct quote by email, physical address unknown)

“we comment on the gas plan, east of New Town, North Dakota.

1. The area generate much traffic and safety concerns. The gravel road sucks and needs to be paved, it is hazzardous with heavy trucks turning into the gravel approach.
2. No adequate railroad markings, on train track thru the area.
3. The road needs to be paved into the facility.
4. AIR. The continuous truck traffic into the area needs some type of monitor, e.g. the trucks burn a lot of fuel waiting around, and traveling to the gas or crude plant.
5. NO SIGNS. no signs exist around the area such as by the road explaining what the PLANT is or what it does. The public has no way of what gases etc are escaping from the plant. More information should be given to the public in case of an emergency such as if a part malfunctions or catches on fire. What is the safety plan for the Plant or area, or public road about 1.5 miles north of the Plant.
6. There is HEAVY traffic on highway 23 between the scenic bar corner (no 8 hiway) and hiway 23 west. There should be some provision for safety or traffic turnouts NOW, where the trucks turn into the gas or crude plant. There are no turn lanes or safety lanes or trucks or other cars to use. For example, if a an oil tanker (semi-truck)\_blew up, there is a pipeline running by the road area. Possibly this could impact the pipeline and the plant.
7. Also, there are other pipeline facilities in the area. e.g. further east on hiway 23 (about 5 miles past scenic bar). THERE are no markings of any kind and safety concerns, same as above 1-6, apply to this area.
8. And same concerns on traffic and lack of any warnings also apply to the WHITING or Robinson lake gas plant. This plant is located North on hiway 8 (towards stanley, nd) about 20 miles from Junction hiway 23. The lack of any warnings seem to endanger people in case of an explosion or fire etc. at a gas type plan.

The same concerns apply to the various pipe-lines that snake through the area and Ft. Berthold Indian Reservation, like worms going all over the place.”

### EPA Region 8 Air Program (EPA) Response:

Thank you for the comments provided in an email dated April 23, 2012.

The EPA is dedicated to protecting the National Ambient Air Quality Standards (NAAQS), and reviews each proposed action to assure that these standards are not compromised. The permitting program under which this permit has been issued (40 CFR 49.151) has provided the EPA with new authority to regulate the industry in Indian country similar to the regulations that apply to the same industry that operate in the state’s jurisdiction.

This new regulation at 40 CFR 49.151 requires that an Air Quality Impact Assessment (AQIA) modeling analysis be performed if there is reason to be concerned that new construction would cause or contribute to a NAAQS or Prevention of Significant Deterioration (PSD) increment violation. If the AQIA reveals that the proposed construction could cause or contribute to a NAAQS or PSD increment violation, such impacts must be addressed before a pre-construction permit can be issued.

The EPA has set NAAQS for six principal pollutants, which are called "criteria" pollutants. They are promulgated at 40 CFR Part 50 and are also listed below. Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ).

<b>Pollutant [final rule cite]</b>	<b>Primary/ Secondary</b>	<b>Averaging Time</b>	<b>Level</b>	<b>Form</b>
<u>Carbon Monoxide</u> [76 FR 54294, Aug 31, 2011]	primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
<u>Lead</u> [73 FR 66964, Nov 12, 2008]	primary and secondary	Rolling 3 month average	0.15 $\mu\text{g}/\text{m}^3$	Not to be exceeded
<u>Nitrogen Dioxide</u> [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]	primary	1-hour	100 ppb	98th percentile, averaged over 3 years
	primary and secondary	Annual	53 ppb	Annual Mean
<u>Ozone</u> [73 FR 16436, Mar 27, 2008]	primary and secondary	8-hour	0.075 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
<u>Particle Pollution</u> [71 FR 61144, Oct 17, 2006]	PM <sub>2.5</sub> primary and secondary	Annual	15 $\mu\text{g}/\text{m}^3$	annual mean, averaged over 3 years
		24-hour	35 $\mu\text{g}/\text{m}^3$	98th percentile, averaged over 3 years
	PM <sub>10</sub> primary and secondary	24-hour	150 $\mu\text{g}/\text{m}^3$	Not to be exceeded more than once per year on average over 3 years
<u>Sulfur Dioxide</u> [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]	primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Table is from the EPA's Air and Radiation website at <http://www.epa.gov/air/criteria.html>

The NAAQS are monitored by the Three Affiliated Tribes of the Fort Berthold Indian Reservation and the State of North Dakota. There are also three air ambient monitors operated by industry. The Tribes have operated air monitoring stations known as "Makoti" in Ward County (approximately 20 miles NE of New Town) and "Twin Buttes" in Mercer County (approximately 30 miles SE of New Town) since 2009. At both of these stations, the Tribes run analyzers for sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO, NO<sub>2</sub>, and NO<sub>x</sub>) and meteorological sensors. The Makoti monitor is also being used by the state to monitor ozone pollution. In addition, the Tribes operate the Dragswolf monitoring station, which is equipped

only with meteorological sensors and a data logger, in Mountrail County, near New Town (approximately 10 miles SW of New Town).

The state of North Dakota operates seven ambient air monitoring stations in western North Dakota, industry operates three monitors; all within approximately 40-80 miles of New Town: Dunn, Theodore Roosevelt National Park (North and South Units), Lostwood National Wildlife Refuge, Beulah, Hanover, and Williston (to be installed), DGC (industry operated), Bear Paw (industry operated), and Hess (industry operated). These stations monitor some or all of the following pollutants: PM, NO, NO<sub>2</sub>, and NO<sub>x</sub>, SO<sub>2</sub>, carbon monoxide (CO), and ozone (O<sub>3</sub>).

The entire state of North Dakota and the Fort Berthold Indian Reservation are both currently in attainment for all of the NAAQS pollutants, and we will continue to monitor the pollutants to ensure that the air quality is protected.

Your comments appear to reference existing gas plants, crude plants, and pipeline facilities in the area, but they do not apply to this specific permit action for approval to construct a new crude oil transfer terminal. However, the EPA understands the concerns you have raised in general. We recognize the rapid oil and gas development on the Fort Berthold Indian Reservation and are taking steps to address the impact this development could have on the air quality.

To address some of your concerns, the EPA has added language to limit fugitive dust emissions from activities specific to this facility, which will help to protect the NAAQS for particulate matter pollution. The EPA does not have the authority to regulate mobile sources such as tank trucks in this permit action. Therefore, no further changes have been made to this permit.



**United States Environmental Protection Agency  
Region 8, Air Program  
1595 Wynkoop Street  
Denver, CO 80202**



**Air Pollution Control  
Synthetic Minor Source Permit to Construct**

**40 CFR 49.151**

**#SMNSR-TAT-000044-2012.001**

*Synthetic Minor Permit to Construct to establish a facility-wide volatile organic compound (VOC) emission limit to avoid Prevention of Significant Deterioration (PSD) permitting requirements for major sources; and Title V (Part 71) permitting requirements with respect to VOC emissions.*

**Permittee:**

Van Hook Crude Terminal, LLC

**Permitted Facility:**

Van Hook Crude Terminal on the  
Fort Berthold Indian Reservation  
Mountrail County, North Dakota

**Effective:**

September 1, 2012

## Summary

On October 7, 2011, Van Hook Crude Terminal LLC (Van Hook) requested permission to construct and operate a crude oil truck-to-rail trans-loading facility with five (5) crude oil storage tanks (297,000 barrels total capacity), eight (8) truck-to-tank off loading stations, and nine (9) tank-to-rail car loading stations. The EPA has approved this request.

**Permit number:**

SMNSR-TAT-000044-2012.001

Based on the uncontrolled emission estimates of the proposal, this facility would be subject to Prevention of Significant Deterioration (PSD) permitting. The applicant requested emission limitations that would limit the facility-wide emissions of volatile organic compounds (VOC) to levels below the thresholds that would have required them to obtain a Prevention of Significant Deterioration (PSD) pre-construction permit. Based on the requested VOC emission limit, Van Hook could also avoid Title V permit requirement under 40 CFR Part 71, provided that all other pollutants regulated under the Part 71 program are below the emissions thresholds.

Potential uncontrolled emissions of VOC from the construction were estimated to be 4,007 tons per year (tpy). This final permit requires the installation of controls with a 98% VOC destruction efficiency, and a limit on the amount of crude oil that can flow through the facility in any given year to minimize VOC emissions at the facility. However, potential uncontrolled emissions of all other regulated pollutants were estimated to be at concentrations below the levels that trigger PSD permitting requirements. Therefore, only limits for VOC emissions needed to be addressed in this permit. This approved final permit has an allowable VOC emission level of 92.0 tpy.

The uncontrolled potential emissions for all other criteria pollutants are as follows:

NO <sub>x</sub> =	5.12 tpy (uncontrolled potential, not a limit)
SO <sub>2</sub> =	0.13 tpy (uncontrolled potential, not a limit)
CO =	3.56 tpy (uncontrolled potential, not a limit)
PM =	0.58 tpy (uncontrolled potential, not a limit)
PM <sub>10</sub> =	0.58 tpy (uncontrolled potential, not a limit)
PM <sub>2.5</sub> =	0.58 tpy (uncontrolled potential, not a limit)
CO <sub>2e</sub> =	12,177 tpy (uncontrolled potential, not a limit)

Van Hook is required to use vapor collection and enclosed combustors for control of VOC emissions displaced during loading of rail cars. Additionally, the storage tanks must be equipped with internal floating roofs and the truck off loading stations must use submerged filling to control VOC emissions from the storage tanks and truck off loading operations. Requirements have also been included for minimizing fugitive dust from construction and operation activities.

The EPA has determined that dispersion modeling for the proposed project was not necessary, because emissions would be controlled by at least 98% and there are no identified air quality concerns with regard to effects of VOC emissions within the external boundaries of the Fort Berthold Indian Reservation airshed.



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## **I. Conditional Permit to Construct**

### **A. General Information**

Facility:	Van Hook Crude Terminal
Permit number:	SMNSR-TAT-000044-2012.001
SIC Code and SIC Description:	5171 – Petroleum Bulk Stations and Terminals

<u>Site Location:</u>	<u>Corporate Office Location</u>
Van Hook Crude Terminal	Van Hook Crude Terminal, LLC
NW ¼ SW ¼ Sec 20 T152N R91W	9590 New Decade Drive
Fort Berthold Indian Reservation	Pasadena, Texas 77507
Mountrail County, ND	

The equipment listed in this permit shall be operated by Van Hook Crude Terminal, LLC at the following location:

Latitude 47.968056N, Longitude -102.363889W

### **B. Construction**

This permit approves the construction and operation of a crude oil truck-to-rail trans-loading facility. The facility will include five crude oil storage tanks (two tanks with 6,000-barrel capacity each and three tanks with 95,000 barrel capacity each), eight truck load out stations, and nine rail loading stations. The crude oil storage tanks will be equipped with internal floating roofs for control of VOC emissions from crude oil storage tanks. The truck off-loading stations will use submerged filling arms and piping to the tanks. The tanks will act as intermediate storage between the trucks or pipelines that will deliver the crude oil to the facility and the rail cars that will transport the crude oil to its final destination. Occasional direct loading from trucks to railcars may occur, thus bypassing and avoiding emissions associated with the tanks. The Permittee will use vapor collection and combustion with 98% reduction efficiency for the control of VOCs displaced during loading of crude oil into rail cars. The Permittee will also construct and operate a 1,490 brake horse power (bhp) diesel-fired emergency generator to provide electrical power in the event of a power outage.

### **C. Applicability**

1. This Federal Permit to Construct is being issued under the authority of 40 CFR 49.151, Federal Minor New Source Review Program in Indian Country (Minor NSR).
2. The requirements in this permit have been created, at the Permittee's request, to establish a facility-wide VOC emission limit to avoid PSD permitting requirements found at 40 CFR Parts 52; and Title V permitting requirements found at 40 CFR Part 71.
3. The requirements in this permit are intended to establish legally and practically enforceable restrictions on the potential-to-emit (PTE) of VOC emissions.

4. Any conditions established for this facility or any specific units at this facility pursuant to any Conditional Permit to Construct issued under the authority of 40 CFR Part 52 (PSD) or 40 CFR Part 49 (Federal Minor NSR) shall continue to apply.
5. By issuing this permit, EPA does not assume any risk of loss which may occur as a result of the operation of the permitted facility by the Permittee, owner, and/or operator, if the conditions of this permit are not met by the Permittee, owner, and/or operator.

**D. Facility-Wide Emission Requirements**

1. Facility-wide Emission Limit

Facility-wide VOC emissions shall not exceed 92.0 tons during any consecutive twelve (12) months.

2. Work Practice and Operational Requirements

- (a) Total liquid flow rate of crude oil to the rail cars shall not exceed 31,025,000 barrels in any given consecutive 12-month period (average of 85,000 barrels per day).
- (b) All liquid and gas collection, storage, and handling operations, regardless of size, shall be designed, operated and maintained so as to minimize leakage of hydrocarbons to the atmosphere.

3. Monitoring Requirements – VOC Emissions Calculations

- (a) Total liquid flow rate of crude oil to the rail cars shall be measured as specified in the **Requirements for Rail Loading** section of this permit.
- (b) Facility-wide actual VOC emissions shall be calculated, in tons, and recorded at the end of each month, beginning with the first calendar month that operations commence.
- (c) Prior to twelve (12) full months of facility-wide VOC emissions calculations, the Permittee shall, at the end of each month, add the emissions for that month to the calculated emissions for all previous months since production commenced and record the total. Thereafter, the Permittee shall, at the end of each month, add the emissions for that month to the calculated emissions for the preceding eleven (11) months and record a new twelve (12) month total.
- (d) VOC emissions from all controlled and uncontrolled emission sources at the facility shall be included in the monthly calculation, including, but not limited to: crude oil storage tanks, truck load out operations, rail loading operations, engines, enclosed combustion devices, and equipment leaks.
- (e) VOC emissions shall be calculated as specified in this permit.

4. Testing Requirements

The Permittee shall conduct semiannual extended laboratory analysis of the crude oil received at the facility to obtain an actual Reid vapor pressure (RVP) to be used in calculating monthly VOC emissions from the truck load out and rail car loading and vapor combustion processes.

5. Recordkeeping Requirements

The Permittee shall maintain the following records:

- (a) The actual rolling monthly facility-wide VOC total emissions, in tpy;
- (b) Daily total liquid flow rate of crude oil to the rail cars;
- (c) The results of each extended laboratory analysis of the crude oil received at the facility;
- (d) All input parameters and methodologies used to calculate the facility-wide monthly VOC emissions; and
- (e) All deviations from the requirements of this permit.

**E. Requirements for Minimizing Fugitive Dust**

1. Work Practice and Operational Requirements

- (a) The Permittee shall take all reasonable precautions to prevent fugitive dust emissions and shall construct, maintain, and operate the facility to minimize fugitive dust emissions. Reasonable precautions include, but are not limited to the following:
  - i. Use, where possible, water or chemicals for control of dust during construction and operations, grading of roads, or clearing of land;
  - ii. Application of asphalt, oil (but not used oil), water, or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces that can create airborne dust;
  - iii. The prompt removal from paved streets of earth or other material that does or may become airborne; and
  - iv. Restricting vehicle speeds at the facility.
- (b) The Permittee shall prepare and implement a written fugitive dust emission prevention plan that specifies the reasonable precautions to be taken and the procedures to be followed to prevent fugitive dust emissions.

2. Monitoring Requirements

- (a) The Permittee shall periodically survey the facility during construction and operation to determine if there are obvious visible dust plumes. This survey must be done once per week, at a minimum, in all active areas and during daylight hours.
- (b) The Permittee shall document the results of the survey, including the date and time of the survey, identification of the cause of the visible dust plumes found, and the reasonable precautions taken to prevent the fugitive dust emissions.

3. Recordkeeping Requirements

The permittee shall maintain records for five years that document the fugitive dust prevention plan, the periodic surveys and the reasonable precautions that were taken to prevent fugitive dust emissions.

**F. Requirements for Truck Load Out Stations and Crude Oil Storage Tanks**

1. Work Practice and Operational Requirements

- (a) The Permittee shall install and operate a truck load out piping system designed for submerged off-loading of crude oil from trucks to the storage tanks at the facility.
- (b) The Permittee shall install, operate and maintain crude oil storage tanks designed with internal floating roofs and mechanical shoe rim seal systems.

2. Monitoring and Testing Requirements

- (a) The Permittee shall visually inspect the internal floating roof, the seal system, and any other gaskets, slotted membranes, and sleeve seals, prior to initial filling of each storage tank with crude oil, at least once every twelve (12) months after initial fill, and each time the storage tank is emptied and degassed.
- (b) The Permittee shall repair the items before filling or refilling the storage tank with crude oil if one or more of the following are observed:
  - i. If the internal floating roof is not resting on the surface of the crude oil inside the storage tank;
  - ii. There is liquid accumulated on the roof;
  - iii. The seal is detached, or there are holes, tears, or other openings in the primary or secondary seal or seal fabric;
  - iv. The gaskets no longer close off the liquid surfaces from the atmosphere; or
  - v. The slotted membrane has more than 10% open area.

- (c) VOC emissions from crude oil storage tanks at the facility due to standing, working and breathing losses for each calendar month shall be calculated using the most current version of the EPA TANKS program and the following:
  - i. Total measured volume of crude oil transferred to rail cars for the month (bbl); and
  - ii. Molecular weight of vapors, pounds per pound-mole (lbs/lb-mole) of **50 lbs/lb-mole** from North Dakota Department of Health (NDDH) estimate for Bakken Formation crude oil.

*[Note to Permittee: EPA TANKS can be found online at <http://www.epa.gov/ttnchie1/software/tanks/index.html>.]*

### 3. Recordkeeping Requirements

- (a) The Permittee shall document and maintain a record of each storage tank inspection and any repairs.
- (b) All storage tank inspection records shall include, at a minimum, the following information:
  - i. The date of the inspection;
  - ii. All documentation and/or images produced in the inspection;
  - iii. The findings of the inspection;
  - iv. Any corrective action taken; and
  - v. The inspector's name and signature.

## G. **Requirements for Rail Loading Stations**

### 1. Work Practice and Operational Requirements

- (a) Crude oil at the facility shall only be loaded into rail cars equipped with vapor collection equipment that is compatible with the vapor collection system at the facility.
- (b) All VOC emissions from the rail loading stations at the facility shall be continuously controlled using an enclosed vapor collection system that routes vapors to an enclosed combustion device designed and operated to reduce the mass content of VOC emissions vented to the device by at least 98.0 %.
- (c) All piping connections, fittings, valves, or any other appurtenance employed to contain and collect vapors and transport them to the enclosed combustion device shall be designed to operate under negative pressure (suction) using a blower fan, maintained in a leak-free condition and connected and operating at all times a rail loading event is occurring.

- (d) The enclosed combustion device shall be:
  - i. Designed to have sufficient capacity to achieve at least a 98.0 % destruction efficiency for the minimum and maximum hydrocarbon mass flow routed to the device;
  - ii. Equipped with an automatic ignition system or continuous burning pilot;
  - iii. Equipped with a thermocouple, or similar temperature sensing device, to detect the presence of a pilot flame;
  - iv. Equipped with a continuous recording device, such as a chart recorder or similar device, to document the presence of a flame;
  - v. Maintained in a leak-free condition; and
  - vi. Designed to minimize visible smoke emissions.
- (e) The Permittee shall follow the manufacturer's written operating instructions, procedures and maintenance schedule for the enclosed combustion device and enclosed vapor collection system, to ensure good air pollution control practices for minimizing emissions.
- (f) Control devices other than those listed above that are capable of achieving a control efficiency at least equivalent to that specified in this permit may be utilized upon EPA approval.

## 2. Testing and Monitoring Requirements

- (a) The Permittee shall measure the barrels of crude oil loaded into rail cars from the crude oil storage tanks using a meter.
- (b) Within 180 days after initial startup, during a rail loading event, the Permittee shall conduct a VOC emissions test of the enclosed combustor to which emissions from the combined rail loading stations are routed, to demonstrate 98% destruction efficiency. Emissions testing shall be conducted in accordance with EPA Reference Method 25A, listed in 40 CFR Part 60, Appendix A. The Permittee may submit a written request to the EPA for an alternate testing method, but shall only use that test method upon receipt of written approval by the EPA.
- (c) Within 180 days after initial start-up and every five (5) years thereafter, the Permittee shall verify the destruction efficiency of the VOC control equipment using EPA approved test methods.
- (d) Within 180 days after initial start-up, and every five (5) years thereafter, during a rail loading event, the Permittee shall conduct a test of the closed-vent system to demonstrate that it is operating under negative pressure. Testing shall be conducted in accordance with EPA Reference Method 21, listed in 40 CFR Part 60, Appendix A. The Permittee may submit a written request to the EPA for an alternative testing method, but shall only use that test method upon receipt of written approval by the EPA.
- (e) The Permittee shall monitor the enclosed vapor collection system during all rail loading events, to confirm proper operation as follows:

- i. Continuously ensure that the blower fan is operating at all times a rail loading event is occurring using vacuum pressure measurement upstream of the blower fan; and
  - ii. In the event that the blower fan is not operational, immediately shut down all loading operations and repair the blower fan. Loading operations shall not resume until the blower fan is repaired and operational.
- (f) The Permittee shall monitor the control device to confirm proper operation as follows:
  - i. Continuously monitor the pilot flame using a thermocouple and recording device that indicates the continuous ignition of the pilot flame at all times the enclosed combustion device is operating;
  - ii. Check the recording device to insure proper operation once per day;
  - iii. Check the pilot flame to insure proper operation once per day; and
  - iv. Correct a pilot flame failure when notified by the malfunction alarm, as soon as possible, but no longer than five (5) days from the day of the notification.
- (g) VOC emissions from rail loading for each calendar month shall be calculated using the methodology described in the most current version of EPA AP-42 – Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Section 5.2 Transportation and Marketing of Petroleum Liquids (for loading losses), and using the following:
  - i. Total measured volume of crude oil produced for the month (bbl);
  - ii. Molecular weight of vapors, pounds per pound-mole (lbs/lb-mole) of **50 lbs/lb-mole** from NDDH estimate for Bakken Formation crude oil;
  - iii. The hours that losses from rail car loading were routed to the enclosed combustion device – assume **24 hours per day** for each day of the month; and
  - iv. The destruction efficiency of the enclosed combustion device as required by this permit.

### 3. Recordkeeping Requirements

- (a) Records shall be kept daily of the total barrels of oil transferred to the rail cars.
- (b) Records shall be kept of the site specific design input parameter provided by an independent engineering analysis, or the manufacturer or vendor, and used to properly size the enclosed combustor to assure the 98.0 % VOC reduction requirement in this permit. The permittee has selected maximum total liquid flow rate to the rail cars as the design input parameter.
- (c) Records shall be kept of all exceedances of the maximum total liquid flow rate limit of crude oil to the rail cars as specified in this permit. The records shall include the enclosed combustor's total operating time during the calendar month in which the exceedance occurred, the date, time and length of time that the parameters were exceeded, and the corrective actions taken or the preventative measures adopted to operate the facility within that operating parameter.



- (d) Records shall be kept of any instances in which the blower fan on the vapor collection system malfunctions while a rail loading event is occurring, the date of the malfunction, and the amount of time that the rail loading event continued before being shut down for blower fan repairs.
- (e) Records shall be kept of any instances in which the enclosed combustion device was bypassed or down in each calendar month while crude oil was being loaded onto rail cars, the reason for each incident, its duration, and the corrective actions taken or the preventative measures adopted to avoid such bypasses or downtimes.
- (f) Records shall be kept of any instances in which the pilot flame is not present in the enclosed combustor while it is operating, the date and times that the pilot was not present and the corrective actions taken or the preventative measures adopted to increase the operating time of the pilot flame.
- (g) Records shall be kept of any instances in which the thermocouple installed to detect the presence of a flame in the enclosed combustor is not operational while the enclosed combustor is operating, the time period during which it was not operational, and the corrective measures taken.
- (h) Records shall be kept of all required testing and monitoring. The records shall include the following:
  - i. The date, place, and time of observations, sampling or measurements;
  - ii. The date(s) analyses were performed;
  - iii. The companies or entities that performed observations and the analyses;
  - iv. The analytical techniques or methods used;
  - v. The results of such analyses or measurements; and
  - vi. The operating conditions as existing at the time of sampling or measurement.

#### **H. Requirements For Diesel Fired Emergency Generator Engine**

1. The Permittee shall install no more than one (1) diesel-fired compression ignition internal combustion engine with a site rated horse power of no more than 400 bhp to be used for electricity generation until utility power is available.
2. The Permittee shall only install an engine compliant with the Tier 2 New Source Performance Standards for Compression Ignition Internal Combustion engines found at 40 CFR Part 60, Subpart IIII, as appropriate.
3. The Permittee shall limit the hours of operation of the diesel-fired emergency generator engine constructed and operated at the facility to no more than 500 hours in any consecutive 12-month period.
4. The Permittee shall follow, for the engine and any respective control system, the manufacturer's recommended maintenance schedule and procedures to ensure good air pollution control practices for minimizing emissions.

5. VOC emissions from the diesel-fired emergency generator engine for each month shall be calculated using the methodologies and emission factors described in the most current version of EPA AP-42 – Compilation of Air Pollutant Emission Factors, Chapter 3.4 – Large Stationary Diesel and All Stationary Dual Fuel Engines, or emission factors from manufacturer specifications, and the following:
  - (a) Maximum rated horsepower of the engine; and
  - (b) Actual operating hours of the engine for the month (assume 1/12 of 500 hours if actual operating hours are not tracked or available).
6. Records shall be kept of the following:
  - (a) The maximum rated bhp of the engine installed at the facility per written manufacturer's specifications or the manufacturer's nameplate on the equipment;
  - (b) The number of hours the engine constructed at the facility operated, or a notation that 500 hours per year operation is assumed; and
  - (c) All maintenance and procedures performed on the engine constructed and operated at the facility.

**I. Records Retention**

1. The Permittee must retain all records required by this permit for a period of at least five (5) years from the date the record was created.
2. Records must be kept at the facility or the location that has day-to-day operational control over the facility.

**J. Reporting**

1. Any documents required to be submitted under this permit shall be submitted to:

U.S. Environmental Protection Agency  
Region 8 Office of Enforcement, Compliance & Environmental Justice  
Air Toxics and Technical Enforcement Program, 8ENF-AT  
1595 Wynkoop Street  
Denver, Colorado 80202
2. The Permittee shall submit an annual report of rolling twelve (12) month annual emissions each year no later than April 1<sup>st</sup>. The annual report shall cover the period for the previous calendar year. For the first calendar year the Permittee shall submit the cumulative facility wide emissions.
3. The permittee shall promptly submit to EPA a written report of any deviations of emission or operational limits and a description of any corrective actions or preventative measures taken. A "prompt" deviation report is one that is post marked or submitted via electronic mail to [R8AirPermitting@epa.gov](mailto:R8AirPermitting@epa.gov) within:

- (a) Thirty (30) days from the discovery of a deviation that would cause the permittee to exceed the facility-wide emission limits if left un-corrected for more than five (5) days after discovering the deviation; and
  - (b) Twelve (12) months from the discovery of a deviation of recordkeeping or other permit conditions that do not affect the permittee's ability to meet the facility-wide emission limits.
- 4. The Permittee shall submit a report for any required performance test to the EPA Regional Office within 60 days after completing the test.
  - 5. The Permittee shall submit any record or report required by this permit upon EPA request.

## **II. General Provisions**

### **A. Conditional Approval:**

Pursuant to the authority of 40 CFR 49.151, the EPA hereby conditionally grants a Minor NSR permit. This authorization is expressly conditioned as follows:

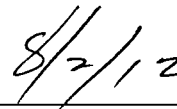
- 1. This permit and any required attachments shall be retained and made available for inspection upon request at the location set forth herein.
- 2. The Permittee shall abide by all representations, statements of intent and agreements contained in the application submitted by the Permittee. The EPA shall be notified ten (10) days in advance of any significant deviation from the permit application as well as any plans, specifications or supporting data furnished.
- 3. The issuance of this Permit to Construct may be suspended or revoked if the EPA determines that a significant deviation from the permit application, specifications, and supporting data furnished has been or is to be made. If the proposed source is constructed, operated, or modified not in accordance with the terms of this permit, the Permittee will be subject to appropriate enforcement action.
- 4. The Permittee shall comply with all conditions of this permit, including emission limitations that apply to the affected emissions units at the permitted source. Noncompliance with any permit term or condition is a violation of the permit and may constitute a violation of the Clean Air Act and is grounds for enforcement action and for a permit termination or revocation.
- 5. The Permittee shall take all reasonable precautions to prevent and or minimize fugitive emissions during the construction period.
- 6. The permitted source shall not cause or contribute to a NAAQS violation or, in an attainment area, shall not cause or contribute to a PSD increment violation.

7. Issuance of this permit does not relieve the Permittee, the owner, and/or operator of the responsibility to comply fully with all other applicable Federal and Tribal rules, regulations, and orders now or hereafter in effect.
8. It is not a defense, for the Permittee, in an enforcement action, to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
9. For proposed modifications, as defined at §49.152(d), that would increase an emissions unit's allowable emissions of a regulated NSR pollutant above its existing permitted annual allowable emissions limit, the Permittee shall first obtain a permit modification pursuant to 40 CFR Part 49 approving the increase. For a proposed modification that is not otherwise subject to review under major NSR or under this program, such proposed increase in the annual allowable emissions limit shall be approved through an administrative permit revision as provided at §49.159(f).
10. At such time that a new or modified source at the permitted facility or modification of the permitted facility becomes a major stationary source or major modification solely by virtue of a relaxation in any legally and practically enforceable limitation which was established after August 7, 1980, on the capacity of the permitted facility otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of 40 CFR 52.21 shall apply to the source or modification as though construction had not yet commenced on the source or modification.
11. *Revise, Reopen, Revoke and Reissue, or Terminate for Cause:* The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee, for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. The EPA may reopen a permit for a cause on its own initiative, e.g., if the permit contains a material mistake or the facility fails to assure compliance with the applicable requirements.
12. *Severability clause:* The provisions of this permit are severable, and in the event of any challenge to any portion of this permit, or if any portion is held invalid, the remaining permit conditions shall remain valid and in force.
13. *Property Rights:* The permit does not convey any property rights of any sort or any exclusive privilege.
14. *Information Requests:* The Permittee shall furnish to the EPA, within a reasonable time, any information that the EPA may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. For any such information claimed to be confidential, the Permittee shall also submit a claim of confidentiality in accordance with Part 2, Subpart B of Title 40 of the Code of Federal Regulations.

15. *Inspection and Entry:* The EPA or its authorized representatives may inspect the permitted facility during normal business hours for the purpose of ascertaining compliance with all conditions of this permit. Upon presentation of proper credentials, the Permittee shall allow the EPA or its authorized representative to:
- (a) Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
  - (b) Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
  - (c) Inspect, during normal business hours or while the source 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 for the purpose of assuring compliance with the permit or other applicable requirements; and
  - (e) Record any inspection by use of written, electronic, magnetic and photographic media.
16. *Permit Effective Date:* This permit is effective immediately upon issuance unless comments resulted in a change in the draft permit, in which case the permit is effective 30 days after issuance. The Permittee may notify the EPA, in writing, that this permit or a term or condition of it is rejected. Such notice should be made within thirty days of receipt of the permit and should include the reason or reasons for rejection.
17. *Permit Transfers:* Permit transfers shall be made in accordance with 40 CFR 49.159(f). The Air Program Director shall be notified in writing at the address shown below if the company is sold or changes its name.
- U.S. Environmental Protection Agency  
Region 8 Air Permitting, Modeling, and Monitoring Unit  
c/o Tribal Air Permitting, 8P-AR  
1595 Wynkoop Street  
Denver, Colorado 80202
18. *Invalidation of Permit:* This permit becomes invalid if construction is not commenced within 18 months after the effective date of the permit, construction is discontinued for 18 months or more, or construction is not completed within a reasonable time. The EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between the construction of the approved phases of a phased construction project; the Permittee shall commence construction of each such phase within 18 months of the projected and approved commencement date.
19. *Notification of Start-Up:* The Permittee shall submit a notification of the anticipated date of initial start-up of the source to the EPA within 60 days of such date.

**B. Authorization:**

Authorized by the United States Environmental Protection Agency, Region 8



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Callie A. Videtich  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

Date