



Hermes Consolidated, LLC

dba Wyoming Refining Company

Corporate Headquarters

1600 Broadway Suite 2300 ~ Denver CO 80202-4923

Phone 303-894-9966 ~ Fax 303-837-9089

April 13, 2015

NSR Permitting Program (Application)

WY Dept. of Environmental Quality

Air Quality Division

Herschler Building 2-E

122 West 25th Street

Cheyenne, WY 82002

RE: NSR Application (A0000797) – Tank 47 conversion to diesel service

Sirs,

Wyoming Refining Company (“WRC”) is applying for the Division’s approval to convert Tank 47 at the Newcastle Refinery from gasoline to diesel service. WRC believes this application qualifies for a permit waiver under WAAQSR Chapter 6, Section 2(k)(viii) in that this modification is “insignificant in both emission rate and ambient air quality impact”.

Reason for Change

Until recently, Tank 47 has been used for gasoline storage. The tank is currently out of service both because its internal roof, which is four or five years old, recently collapsed and for safety reasons. The top portion of Tank 47’s wall is distorted and prevents the internal floating roof from traveling the full vertical distance inside the tank. Approximately only 23,000 barrels of the tank’s estimated 31,000 barrel capacity have been useable; the remaining capacity was not. WRC does not believe a new internal roof to service approximately two-thirds of the tank’s volume will have any longer life than the current internal roof. In addition, WRC’s experience with Tank 44, destroyed on April 1, 2011 by an explosion and fire related to internal floating roof static, cautions strongly against installing another internal floating roof in this situation. On September 22, 2011, the Division issued permit waiver wv-12443 to construct Tank 48 as a replacement for Tank 44.

Tank 47, however, is still perfectly useful to WRC if it can be placed into diesel service as a fixed roof tank without an internal floating roof. This application requests permission to make that change.

Emission Changes

Historical emissions reported for Tank 47 are:

Pollutant \ Year	2010	2011	2012	2013	2014
VOC (tpy)	3.9	5.0	4.5	4.6	4.3
HAP (tpy)	0.2	0.2	0.2	0.2	0.2

The 2011 and 2012 two-year average is 4.75 tpy VOC and 0.2 tpy HAP. The current calculated average pound per hour emissions at the 2014 emission rate are 0.98 lb/hr VOC and 0.046 lb/hr HAP.

Calculated emissions for #1 diesel storage without an internal floating roof, assuming 220,000 bbls/yr throughput and 2014 temperatures, are 7.8 tpy and 1.8 lb/hr VOC and 0.10 tpy and 0.02 lb/hr HAP. A printout of the calculation worksheet is attached. Nothing more volatile than #1 diesel will be stored in this tank. Thus, these values represent worst-case or potential emissions.

Prevention of Significant Deterioration

This modification is insignificant under PSD requirements. The calculated emission increase based on the new potential less the 2011-2012 average is 3.1 tpy whereas the PSD significance level for VOC is 40 tpy. Although this modification is not related to the refinery expansion project permitted under MD-13335, aggregation with that project's calculated 31.9 tpy net emission increase would still not result in PSD significance. HAP emissions will decrease.

New Source Performance Standards

This modification will result in an hourly VOC emission rate increase potentially triggering New Source Performance Standards. However, the applicability criterion for NSPS 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*, is a maximum true vapor pressure equal to or greater than 5.2 kPa (0.745 psi) and less than 76.6 kPa (11.1 psi). The calculated true vapor pressure for #1 diesel at a bulk liquid storage temperature of 75 °F (the average 2014 liquid temperature for Tank 47 was 61°F) is 0.32 psi. Thus, storage of #1 diesel and less volatile petroleum liquids is not subject to NSPS.

Best Available Control Technology

The Division generally considers fixed roof tanks for storage of low vapor pressure liquids as meeting BACT requirements.

Conclusion

This modification qualifies for a permit waiver under WAAQSR Chapter 6, Section 2(k)(viii), and WRC respectfully requests the Division's prompt consideration of and determination on this request.

Sincerely,



Bob Neufeld, Vice President
Environment & Government Relations

attachments (2)

cc w/ attach: WRC – Mike Baldwin, Shane Crawford, Staci Hammond, Mike Farnsworth
wrn

Wyoming Refining Company
1600 Broadway, Ste 2300
Denver, Colorado 80202-4991

**NSR Application A0000797
Newcastle Refinery
F000980
April 13, 2015**

If I am claiming any information in this submission is a trade secret, I hereby swear or affirm that the trade secret request meets the requirements of Wyoming Air Quality Standards and Regulations and that the justification submitted with the trade secret request sets forth the basis for claiming that the information should be considered a trade secret as defined in Wyoming Air Quality Standards and Regulations.

a) I am a Responsible Official as defined in applicable Wyoming Air Quality Standards and Regulations; and

b) Based on information and belief formed after reasonable inquiry, I hereby affirm that all factual statements in this transmittal are true, accurate and complete to the best of my knowledge and that all judgments and estimates have been made in good faith.

Account: wrnoof

Date/time submitted: Apr 13 2015, 13:54:30

Air Quality Division
Application for NSR Permit

Apr 13 2015, 13:54:30

- NSR Application

This information should be filled out for each New Source Review (NSR) application. An NSR permit is required for all air contaminant sources (emissions units) installed or modified after January 1, 1974. See the application instructions for additional information.

- Purpose of Application

Please summarize the reason this permit is being applied for.

Remove internal floating roof from Tank 47 and convert the tank from gasoline to fixed, cone roof diesel service.

Has the facility changed location or is it a new/greenfield facility? No

Does production at this facility contain H2S? No

- Federal Rules Applicability - Facility Level

Prevention of Significant Deterioration (PSD) Not affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not affected
These rules are found under WAQSR Chapter 6, Section 13.

- Trade Secret Information - One or more Emissions Units in this application contains trade secret information.

No

- Permit Application Contact - Newly created contacts and application contact changes will be saved when the application is saved.

Warren Neufeld	VP, Environment and Government Relations	
Name	Title	Company
1600 Broadway, Ste 1550	Denver, CO	80202
Street Address	City/Township, State	Zip Code
(303)390-0119	(303)484-2666	wneufeld@wyref.com
Phone	Fax	E-mail

- Modeling Section

Ambient Air Quality Impact Analysis: WAQSR Chapter 6, Section 2(c)(ii) requires that permit applicants demonstrate that a proposed facility will not prevent the attainment or maintenance of any ambient air quality standard.

Has the applicant contacted AQD to determine if modeling is required? No

Is a modeling analysis part of this application? No

Is the proposed project subject to Prevention of Significant Deterioration (PSD) requirements? No

- Application Attachments

Required Attachment	Public Document Id	Attachment Type	Description
X	3569	Process Flow Diagram	Description and Emission Calculations
X	3570	Emissions Calculations	Description and Emission Calculations
X	3571	Cover Letter/Project Description	Description and Emission Calculations

Section II - Specific Air Contaminant Source Information

AQD EU ID: TNK009

AQD EU description: Tank 47 (T-47)

Company EU ID: T-47

Company EU Description: Tank 47 (T-47)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

05/01/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Storage Tank/Silo

Maximum Hourly Throughput 500.0000
:

Units : barrels/hr

Is Tank Heated : No

Operating Pressure (psig) : 0.00

Vapor Pressure of Material 0.01
Stored (psig) :

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day : 24

Hours/year : 8760

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in	0	0		0	0	

diameter (PE/PM2.5)						
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	7.8	0		1.8	7.8	AP-42
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0.1	0		0.02	0.1	AP-42
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			
Ethyl Benzene	VOC-HAP	0.003			0.000696	0.003	AP-42
Toluene	VOC-HAP	0.024			0.00855	0.024	AP-42
Hexane, N-	VOC-HAP	0.039			0.00894	0.039	AP-42
Xylenes (Isomers and Mixture)	VOC-HAP	0.0201			0.00459	0.0201	AP-42
Benzene	VOC-HAP	0.008			0.0018	0.008	AP-42
Naphthalene	VOC-HAP	0.0002			0.000046	0.0002	AP-42
Cumene	VOC-HAP	0.001			0.000251	0.001	AP-42

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
 New Source Performance Standards are listed under 40

CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Facility Detail Report
Facility Name: Newcastle Refinery
ID: F000980

- Facility Information

Facility ID: F000980
 FacilityName: Newcastle Refinery
 Facility Description: Petroleum Refinery
 Company Name: Wyoming Refining Company
 Operating Status: Operating AFS: 5604500001
 Facility Class: Title V Facility Type: Petroleum Refinery
 CERR Class: CAP

- Location

Physical Address	City	County	Lat/Long	PLSS	Effective Date
	Weston County	Weston	43.85122/-104.20708	S29-T45N-R61W	05/08/2012

Location Detail For : null

Latitude: 43.85122 Longitude: -104.20708
 Quarter Quarter: Quarter:
 Section: 29
 Township: 45N Range: 61W
 County: Weston State: Wyoming
 Distict: District 3
 Physical Address 1: Physical Address 2:
 City: Weston County Zip: 82701
 Effective Date: 05/08/2012

- Notes

User Name	Date	Note
Shatto, Tanner	11/13/2014	All units entered are those which were reported in the 2014 Emission Inventory.
Mangin, Zachary	07/21/2014	3-0-126-2A: Issued: 2/22/2007
Data, Legacy	10/09/2012	According to a January 25, 2012 letter, the AQD rescinded the operating permit for this facility effective August 31, 2011 based on the company's February 1, 2011 request letter and successful testing on August 31, 2011.
Data, Legacy	05/08/2012	[WISE_Site_Descr.] Petroleum Refinery

- NAICS Codes

324110 Petroleum Refineries (SIC 2911)

- Contacts

Contact Type	Contact Person	Phone Number	Email	Start Date	End Date

Environmental contact	Baldwin, Michael	(307)746-9863	mbaldwin@wyref.com	05/05/2013	
Environmental contact	Crawford, Shane	(307)746-4445	scrawford@wyref.com	12/20/2013	
Emissions Inventory contact	Crawford, Shane	(307)746-4445	scrawford@wyref.com	12/20/2013	
Environmental contact	Farnsworth, Michael	(307)746-4445	mfarnsworth@wyref.com	05/15/2013	
NSR Permitting contact	Neufeld, Warren Robert	(303)390-0119	wneufeld@wyref.com	05/15/2013	
Emissions Inventory contact	Neufeld, Warren Robert	(303)390-0119	wneufeld@wyref.com	05/15/2013	
NSR Permitting contact	Neufeld, Warren Robert	(303)390-0119	wneufeld@wyref.com	05/15/2013	
Emissions Inventory contact	Neufeld, Warren Robert	(303)390-0119	wneufeld@wyref.com	05/15/2013	
Responsible Official	Neufeld, Warren Robert	(303)390-0119	wneufeld@wyref.com	05/15/2013	
Billing contact	Neufeld, Warren Robert	(303)390-0119	wneufeld@wyref.com	07/09/2015	
Environmental contact	Runyan, James	(303)894-9966	Unknown@gmail.com	05/15/2013	
Responsible Official	Runyan, James	(303)894-9966	Unknown@gmail.com	08/11/2014	
NSR Permitting contact	Havener, Patrick	(307)746-4445		01/01/2000	09/01/2011
NSR Permitting contact	Holwell, Nelson	(307)745-4445		05/15/2013	05/15/2013
NSR Permitting contact	Halliday, Dan	(307)746-4445		05/15/2013	12/20/2013
Environmental contact	Warren, Mike	(307)746-4445	mwarren@wyref.com	10/30/2013	12/20/2013

Contact Detail For : Baldwin, Michael

Prefix: Mr. First Name: Michael
Middle Name: Last Name: Baldwin
Suffix:
Company Title: Manager HSSE Contact's Company Name: Wyoming Refining Company
Address 1: PO Box 820
Address 2:
City: Newcastle Zip Code: 82701
State: Wyoming
Work Phone No: (307)746-9863 Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: Pager PIN No.:
Email: mbaldwin@wyref.com
Email Pager Address:

Contact Detail For : Crawford, Shane

Prefix: Mr .	First Name: Shane
Middle Name:	Last Name: Crawford
Suffix:	
Company Title: Environmental Manager	Contact's Company Name: Wyoming Refining Company
Address 1: PO Box 820	
Address 2:	
City: Newcastle	Zip Code: 82701
State: Wyoming	
Work Phone No: (307)746-4445	Secondary Phone No.: 127
Address 2:	Secondary Ext. No.:
Mobile Phone No.:	Pager No.:
Fax No:	Pager PIN No.:
Email: scrawford@wyref.com	
Email Pager Address:	

Contact Detail For : Farnsworth, Michael

Prefix: Mr .	First Name: Michael
Middle Name:	Last Name: Farnsworth
Suffix:	
Company Title: Vice President of Refining	Contact's Company Name: Wyoming Refining Company
Address 1: P.O. Box 820	
Address 2:	
City: Newcastle	Zip Code: 82701
State: Wyoming	
Work Phone No: (307)746-4445	Secondary Phone No.:
Address 2: (307)746-9710	Secondary Ext. No.:
Mobile Phone No.:	Pager No.:
Fax No:	Pager PIN No.:
Email: mfarnsworth@wyref.com	
Email Pager Address:	

Contact Detail For : Neufeld, Warren Robert

Prefix:	First Name: Warren
Middle Name: Robert	Last Name: Neufeld
Suffix:	
Company Title: VP Environment and Government Relations	Contact's Company Name: Wyoming Pipeline Company LLC
Address 1: 1600 Broadway Ste 1550	
Address 2:	
City: Denver	Zip Code: 80202
State: Colorado	

Work Phone No: (303)390-0119
Address 2: (303)894-9966
Mobile Phone No.: (303)549-1160
Fax No:
Email: wneufeld@wyref.com
Email Pager Address:

Secondary Phone No.:
Secondary Ext. No.: 119
Pager No.:
Pager PIN No.:

Contact Detail For : Neufeld, Warren Robert

Prefix: Mr.
Middle Name: Robert
Suffix:
Company Title: VP, Environment and
Government Relations

First Name: Warren
Last Name: Neufeld

Contact's Company Name: Wyoming Refining Company

Address 1: 1600 Broadway, Ste 1550
Address 2:
City: Denver
State: Colorado

Zip Code: 80202

Work Phone No: (303)390-0119
Address 2: (303)894-9966
Mobile Phone No.: (303)549-1160
Fax No: (303)484-2666
Email: wneufeld@wyref.com
Email Pager Address:

Secondary Phone No.:
Secondary Ext. No.: 119
Pager No.:
Pager PIN No.:

Contact Detail For : Runyan, James

Prefix:
Middle Name:
Suffix:
Company Title:

First Name: James
Last Name: Runyan

Contact's Company Name: Wyoming Refining Company

Address 1: 1600 Broadway, Suite 2300
Address 2:
City: Newcastle
State: Wyoming

Zip Code: 80202

Work Phone No: (303)894-9966
Address 2: (303)784-9966
Mobile Phone No.:
Fax No:
Email: Unknown@gmail.com
Email Pager Address:

Secondary Phone No.:
Secondary Ext. No.:
Pager No.:
Pager PIN No.:

Contact Detail For : Havener, Patrick

Prefix:

First Name: Patrick

Middle Name: Last Name: Havener
Suffix:
Company Title: Contact's Company Name: Wyoming Refining Company
Address 1: P.O. Box 820
Address 2:
City: Newcastle Zip Code: 82701
State: Wyoming
Work Phone No: (307)746-4445 Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: Pager PIN No.:
Email:
Email Pager Address:

Contact Detail For : Holwell, Nelson

Prefix: First Name: Nelson
Middle Name: Last Name: Holwell
Suffix:
Company Title: Contact's Company Name: Wyoming Refining Company
Address 1: PO Box 820
Address 2:
City: Newcastle Zip Code: 82701
State: Wyoming
Work Phone No: (307)745-4445 Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: (307)746-9710 Pager PIN No.:
Email:
Email Pager Address:

Contact Detail For : Halliday, Dan

Prefix: First Name: Dan
Middle Name: Last Name: Halliday
Suffix:
Company Title: Contact's Company Name: Wyoming Refining Company
Address 1: P.O. Box 820
Address 2:
City: Newcastle Zip Code: 82701
State: Wyoming
Work Phone No: (307)746-4445 Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: (307)746-9710 Pager PIN No.:

Email:

Email Pager Address:

Contact Detail For : Warren, Mike

Prefix: Mr . First Name: Mike
 Middle Name: Last Name: Warren
 Suffix:
 Company Title: Environmental Site Manager Contact's Company Name: Wyoming Refining Company
 Address 1: P.O. Box 820
 Address 2:
 City: Newcastle Zip Code: 82701
 State: Wyoming
 Work Phone No: (307)746-4445 Secondary Phone No.: 136
 Address 2: Secondary Ext. No.:
 Mobile Phone No.: Pager No.:
 Fax No: (307)746-4718 Pager PIN No.:
 Email: mwarren@wyref.com
 Email Pager Address:

- Rules & Regs

Subject to Part 60 NSPS: X Subject to 112(r) Accidental Release Prevention:
 Subject to Part 61 NESHAP: Subject to non-attainment NSR:
 Subject Part 63 NESHAP: X Subject to PSD:
 Subject to Title IV Acid Rain:

Part 60 NSPS Subparts

Dc - Small Industrial Steam Generating Units
 GGG - Equipment Leaks of VOC in Petroleum Refineries
 GGGa - Equipment Leaks of VOC in Petroleum Refineries After November 7, 2006
 IIII - Stationary Compression Ignition Internal Combustion Engines
 J - Petroleum Refineries
 QQQ - VOC Emissions From Petroleum Refinery Wastewater Systems
 VV - Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry
 XX - Bulk Gasoline Terminals

Part 63 NESHAP Subparts

ZZZZ - Reciprocating Internal Combustion Engines

- Attachments

Description	Type	Modified By	Modified Date
Sinclair Casper Refining Company_EU_CE_RP Summary.xlsx File	Other	Rairigh, Ken	08/18/2014
Real Field Values Used	Other	Mangin, Zachary	09/26/2014
Permit History as of 12/10/2014	Other	Echols, Benjamin(inactive)	12/15/2014

- Version

Version ID	Version Start Date	Version End Date	Preserved
CURRENT	07/24/2015		X

31269	07/23/2015	07/24/2015	X
31262	07/23/2015	07/23/2015	X
29960	04/13/2015	07/23/2015	X
26547	04/24/2014	04/13/2015	X
980	05/08/2012	04/24/2014	X

- **Emission Unit Information**

AQD Emissions Unit ID: BOL001

Emission Unit Type: Boiler

Heat Input Rating (MMBtu/hr): 27.7

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Model Name and Number: Unknown

AQD Description: H07 / S09 - Boiler #1

Company Equipment ID: H-07

Company Equipment Description: Normally used during startup or for combustion of excess fuel gas. Boiler was permanently removed from refinery in March 2012.

Operating Status: Permanently Shutdown

Shutdown Date: 01/01/2008

Shutdown Notification Date: 01/01/2008

Initial Construction Commencement Date: 01/01/1940

Initial Operation Commencement Date: 01/01/1940

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- **Serial Number Tracking**

Manufacturer Name	Serial Number	Effective Date
Unknown	Unknown	01/01/1940

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC005

Process Name:

Company Process Description: H07 / S09 - Boiler #1

Source Classification Code (SCC): 1-02-007-01

Release points(s) directly associated with this process

VER005

- **Emission Unit Information**

AQD Emissions Unit ID: BOL002

Emission Unit Type: Boiler

Heat Input Rating (MMBtu/hr): 22.7

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Model Name and Number: Unknown

AQD Description: H08 / S09 - Boiler #2

Company Equipment ID: H-08

Company Equipment Description: Unit was permanently removed from the refinery in March 2012.

Operating Status: Permanently Shutdown

Shutdown Date: 01/01/2001

Shutdown Notification Date: 01/01/2001

Initial Construction Commencement Date: 01/01/1940

Initial Operation Commencement Date: 01/01/1940

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- **Serial Number Tracking**

Manufacturer Name	Serial Number	Effective Date
Unknown	Unknown	01/01/1940

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC006

Process Name:

Company Process Description: H08 / S09 - Boiler #2

Source Classification Code (SCC): 1-02-007-01

Release points(s) directly associated with this process

VER005

- **Emission Unit Information**

AQD Emissions Unit ID: BOL003

Emission Unit Type: Boiler

Heat Input Rating (MMBtu/hr): 22.7

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Model Name and Number: Unknown

AQD Description: H09 / S10 - Boiler #3

Company Equipment ID: H-09

Company Equipment Description: Boiler #3 Also serves as control device for VOCs and HAPs from LOCAT oxidizer. Unit was removed from refinery in March 2012.

Operating Status: Permanently Shutdown

Shurdown Date: 01/01/2012

Shutdown Notification Date: 01/01/2012

Initial Construction Commencement Date: 01/01/1940

Initial Operation Commencement Date: 01/01/1940

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- **Serial Number Tracking**

Manufacturer Name	Serial Number	Effective Date
Unknown	Unknown	01/01/1940

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC007

Process Name:

Company Process Description: H09 / S10 - Boiler #3

Source Classification Code (SCC): 1-02-007-01

Release points(s) directly associated with this process

VER007

Emission Unit : BOL004

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: BOL004

Emission Unit Type: Boiler

Heat Input Rating (MMBtu/hr): 5.0

Primary Fuel Type: Pipeline Grade Natural Gas

Secondary Fuel Type: Propane

Model Name and Number: Unknown

AQD Description: H18 / S20 - Boiler #4

Company Equipment ID: H-18

Company Equipment Description: Removed from Refinery

Operating Status: Permanently Shutdown

Shutdown Date: 01/01/2000

Shutdown Notification Date: 01/01/2000

Initial Construction Commencement Date: 08/19/1998

Date:

Initial Operation Commencement Date:

Date:

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Serial Number Tracking

Manufacturer Name	Serial Number	Effective Date
Unknown	Unknown	08/19/1998

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC016

Process Name:

Company Process Description: H18 / S20 - Boiler #4

Source Classification Code (SCC): 1-02-007-01

Release points(s) directly associated with this process

VER016

Emission Unit Information

AQD Emissions Unit ID: BOL005

Emission Unit Type: Boiler

Heat Input Rating (MMBtu/hr): 92.0

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Model Name and Number: INDECK 0-2723

AQD Description: H-23 Indeck Boiler

Company Equipment ID: H-23

Company Equipment Description: H-23 Indeck Boiler. Boiler will supplement and backup the existing CO boiler (H-20) and replace boilers H-07 and H-09. The boiler will be used to reduce the H-20 firing rate and make up the difference with this boiler.

Operating Status: Operating

Initial Construction Commencement Date: 12/01/2011

Initial Operation Commencement Date: 03/01/2012

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

Serial Number Tracking

Manufacturer Name	Serial Number	Effective Date
INDECK	0-2723	12/01/2011

Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
CO - Carbon Monoxide	0.100000		7.400000		Potential emissions based on initial stack test conducted on: 7/25/2012.
NOx - Nitrogen Oxides	0.028000		0.030000		Potential emissions based on initial stack test conducted on: 7/25/2012.

Processes

Emission Process Information

Process ID: PRC023

Process Name:

Company Process Description: H-23 INDECK Boiler

Source Classification Code (SCC): 1-02-007-01

Release points(s) directly associated with this process

VER022

- **Emission Unit Information**

AQD Emissions Unit ID: CCU001

Emission Unit Type: Cracking/Coking Unit

Charge Rate (barrels/hr): 250

AQD Description: FCC. FCC preheater, CO Furnace, and FCC Regenerator release through common stack S-21.

Company Equipment ID: FCC

Company Equipment Description: The residual fluid catalytic cracking unit (FCC) converts heavy oils into lighter products favoring gasoline and distillate blending stocks. FCC also includes the refinery gas plant and RFCC regenerator.

Operating Status: Operating

Initial Construction Commencement Date: 10/18/2000

Initial Operation Commencement Date: 01/21/2002

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC017

Process Name: Fluid catalytic cracking unit

Company Process Description: FCC

Source Classification Code (SCC): 3-06-002-01

Control equipment(s) directly associated with this process

WSC001

- **Emission Process Information**

Process ID: PRC024

Process Name: FCC Preheater

Company Process Description: H-19

Source Classification Code (SCC): 3-06-001-06

Control equipment(s) directly associated with this process

WSC001

- **Emission Process Information**

Process ID: PRC025

Process Name: CO Furnace

Company Process Description: H-20

Source Classification Code (SCC): 1-02-014-02

Control equipment(s) directly associated with this process

WSC001

- **Emission Process Information**

Process ID: PRC057

Process Name: FCC Unit VOC Fugitives

Company Process Description: FCC FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL027

Emission Unit : CTW001

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: CTW001

Emission Unit Type: Cooling Tower

Drift Rate (%): 0.0

Total Dissolved Solids (ppm): 1.0000

AQD Description: COOL / 23 - Cooling Towers

Company Equipment ID: COOL

Company Equipment Description: The refinery cooling system uses evaporative cooling towers for recirculating cooling water.

Operating Status: Operating

Initial Construction Commencement Date: 01/01/1990

Initial Operation Commencement Date: 01/01/1990

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC019

Process Name: Cooling Towers

Company Process Description: COOL / 23 - Cooling Towers

Source Classification Code (SCC): 3-06-007-01

Release points(s) directly associated with this process

AVL003

- Emission Unit Information

AQD Emissions Unit ID: ENG001

Emission Unit Type: Engine

Name Plate Rating: 617.00

Units: hp

Site Rating: 617.00

Units: hp

Primary Fuel Type: Diesel

Secondary Fuel Type: N/A

Model Name and Number: John Deere 6125H070

Engine: Compression Ignition

AQD Description: GEN-1 Emergency Diesel Generator 1, Lift Station Generator

Company Equipment ID: GEN-1

Company Equipment Description: GEN-1 Emergency Diesel Generator 1, Lift Station Generator

Operating Status: Operating

Initial Construction Commencement 02/01/2007
Date:

Initial Operation Commencement 02/01/2007
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Serial Number Tracking

Serial Number	Manufacturer Name	Construction/Installation Commencement Date	Operation Commencement/Start-up Date	Order Date	Manufacture Date	Shutdown Date	Removal Date
RG6125H053 258	John Deere	02/01/2007		03/01/2006	02/08/2006		

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC028

Process Name: GEN-1 Emergency Diesel Generator 1

Company Process Description: GEN-1 Emergency Diesel Generator 1

Source Classification Code (SCC): 2-01-001-02

Release points(s) directly associated with this process

VER026

Emission Unit : ENG002

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: ENG002

Emission Unit Type: Engine

Name Plate Rating: 251.00

Units: hp

Site Rating: 251.00

Units: hp

Primary Fuel Type: Diesel

Secondary Fuel Type: N/A

Model Name and Number: John Deere 6081AF001

Engine: Compression Ignition

AQD Description: GEN-2 Emergency Diesel Generator 2, RO Building Generator

Company Equipment ID: GEN-2

Company Equipment Description: GEN-2 Emergency Diesel Generator 2, RO Building Generator

Operating Status: Operating

Initial Construction Commencement Date: 04/01/2006

Initial Operation Commencement Date: 04/01/2006

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Serial Number Tracking

Serial Number	Manufacturer Name	Construction/Installation Commencement Date	Operation Commencement/Start-up Date	Order Date	Manufacture Date	Shutdown Date	Removal Date
RG6081A174917	John Deere	04/01/2006		01/01/2005	03/14/2006		

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC029

Process Name: GEN-2 Emergency Diesel Generator 2

Company Process Description: GEN-2 Emergency Diesel Generator 2

Source Classification Code (SCC): 2-01-001-02

Release points(s) directly associated with this process

VER027

Emission Unit : ENG003

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: ENG003

Emission Unit Type: Engine

Name Plate Rating: 251.00

Units: hp

Site Rating: 251.00

Units: hp

Primary Fuel Type: Diesel

Secondary Fuel Type: N/A

Model Name and Number: John Deere 6081AF001

Engine: Compression Ignition

AQD Description: GEN-3 Emergency Diesel Generator 3, Instrument Air Generator

Company Equipment ID: GEN-3

Company Equipment Description: GEN-3 Emergency Diesel Generator 3, Instrument Air Generator

Operating Status: Operating

Initial Construction Commencement Date: 04/01/2006

Initial Operation Commencement Date: 04/01/2006

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Serial Number Tracking

Serial Number	Manufacturer Name	Construction/Installation Commencement Date	Operation Commencement/Start-up Date	Order Date	Manufacture Date	Shutdown Date	Removal Date
RG6081A174921	John Deere	04/01/2006		01/01/2005	03/14/2006		

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC030

Process Name: GEN-3 Emergency Diesel Generator 3

Company Process Description: GEN-3 Emergency Diesel Generator 3

Source Classification Code (SCC): 2-01-001-02

Release points(s) directly associated with this process

VER028

Emission Unit : ENG004

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: ENG004

Emission Unit Type: Engine

Name Plate Rating: 85.00

Units: hp

Site Rating: 85.00

Units: hp

Primary Fuel Type: Diesel

Secondary Fuel Type: N/A

Model Name and Number: Perkins-England Engine

Engine: Compression Ignition

AQD Description: OCC Generator - Emergency Diesel Generator OCC. Provides emergency power to the operations and control systems of the refinery.

Company Equipment ID: OCC GEN

Company Equipment Description: OCC Generator - Emergency Diesel Generator OCC.

Operating Status: Operating

Initial Construction Commencement Date: 10/13/2014

Initial Operation Commencement Date: 10/13/2014

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Serial Number Tracking

Serial Number	Manufacturer Name	Construction/Installation Commencement Date	Operation Commencement/Start-up Date	Order Date	Manufacture Date	Shutdown Date	Removal Date
AAJ5070*U995218H	Perkins-England	10/13/2014		05/21/2014	06/01/2014		

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC031

Process Name: OCC Emergency Generator

Company Process Description: OCC Emergency Generator

Source Classification Code (SCC): 2-01-001-02

Release points(s) directly associated with this process

VER029

Emission Unit : ENG005

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: ENG005

Emission Unit Type: Engine

Name Plate Rating: 399.00

Units: hp

Site Rating: 399.00

Units: hp

Primary Fuel Type: Diesel

Secondary Fuel Type: N/A

Model Name and Number: Clark/John Deere JW6H-UFAD70

Engine: Compression Ignition

AQD Description: Fire-1. Fire Pump Engine - South. Diesel Fired Water Pump Engine.

Company Equipment ID: Fire-1

Company Equipment Description: Fire-1. Fire Pump Engine - South. Diesel Fired Water Pump Engine.

Operating Status: Operating

Initial Construction Commencement Date: 11/01/2012

Initial Operation Commencement Date: 11/01/2012

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Serial Number Tracking

Serial Number	Manufacturer Name	Construction/Installation Commencement Date	Operation Commencement/Start-up Date	Order Date	Manufacture Date	Shutdown Date	Removal Date
RG6090L113609	Clark/John Deere	11/01/2012		05/22/2012	07/23/2012		

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC032

Process Name: Fire-1. Fire Pump Engine - South

Company Process Description: Fire-1. Fire Pump Engine - South

Source Classification Code (SCC): 2-02-001-07

Release points(s) directly associated with this process

VER030

- Emission Unit Information

AQD Emissions Unit ID: ENG006

Emission Unit Type: Engine

Name Plate Rating: 400.00

Units: hp

Site Rating: 400.00

Units: hp

Primary Fuel Type: Diesel

Secondary Fuel Type: N/A

Model Name and Number: Cummins BC3 NT C

Engine: Compression Ignition

AQD Description: Fire-2. Fire Pump Engine - North. Diesel Fired Water Pump Engine.

Company Equipment ID: Fire-2

Company Equipment Description: Fire-2. Fire Pump Engine - North. Diesel Fired Water Pump Engine.

Operating Status: Operating

Initial Construction Commencement 11/08/2010
Date:

Initial Operation Commencement 11/08/2010
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Serial Number Tracking

Serial Number	Manufacturer Name	Construction/Installation Commencement Date	Operation Commencement/Start-up Date	Order Date	Manufacturer Date	Shutdown Date	Removal Date
60533769	Cummins	11/08/2010			01/01/1984		

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC033

Process Name: Fire-2. Fire Pump Engine

Company Process Description: Fire-2. Fire Pump Engine

Source Classification Code (SCC): 2-02-001-07

Release points(s) directly associated with this process

VER031

Emission Unit : ENG007

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: ENG007

Emission Unit Type: Engine

Name Plate Rating: 60.00

Units: hp

Site Rating: 60.00

Units: hp

Primary Fuel Type: Pipeline Grade Natural Gas

Secondary Fuel Type: N/A

Model Name and Number: Ford ESG-642

Engine: 4 Stroke Rich Burn

AQD Description: Biotank. 60hp Ford Natural Gas-powered engine to run back-up air blower at biotank.

Company Equipment ID: BIOTANK ENG

Company Equipment Description: Biotank. 60hp Ford Natural Gas-powered engine to run back-up air blower at biotank.

Operating Status: Operating

Initial Construction Commencement 12/21/2005
Date:

Initial Operation Commencement 12/21/2005
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Serial Number Tracking

Serial Number	Manufacturer Name	Construction/Installation Commencement Date	Operation Commencement/Start-up Date	Order Date	Manufacture Date	Shutdown Date	Removal Date
05RK47537	Ford	12/21/2005		09/01/2005	09/01/2005		

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC034

Process Name: Biotank Back-up Blower Engine

Company Process Description: Biotank Back-up Blower Engine

Source Classification Code (SCC): 2-02-002-53

Release points(s) directly associated with this process

VER032

Emission Unit : FLR001

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FLR001

Emission Unit Type: Flare

Maximum Design Capacity: 0.1

Units : MMscf/hr

Minimum Design Capacity: 0.1

Units : MMscf/hr

Pilot Gas Volume (scf/min): 1.6700

AQD Description: H10 / S11 - Main Flare Pilots. Current capacity is 44,000 lb/hr of 65 Mw light olefin gas at 105oF and 5psig.

Company Equipment ID: FLARE, H-10

Company Equipment Description: The flare (FLARE, H-10) is a control device for emergency, process upset, or startup, shutdown, and malfunction releases of combustible material. H-10 includes the flare pilots. The flare pilots are natural gas or sweet gas fired.

Operating Status: Operating

Initial Construction Commencement 01/01/1976
Date:

Initial Operation Commencement 01/01/1976
Date:

Most Recent 09/24/2008
Construction/Modification
Commencement Date:

Most Recent Operation 09/24/2008
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC008

Process Name: Flare 1 Pilots

Company Process Description: H10 / S11 - Flare Pilots

Source Classification Code (SCC): 3-06-009-04

Control equipment(s) directly associated with this process

FLA001

Release points(s) directly associated with this process

VER008

Emission Unit : FLR002

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FLR002

Emission Unit Type: Flare

Maximum Design Capacity: 0.1

Units : MMscf/hr

Minimum Design Capacity: 0.1

Units : MMscf/hr

Pilot Gas Volume (scf/min): 4.2500

AQD Description: FLARE2 / S-12. - Overflow Flare Pilots. Capacity is 378138 49.61 of 49.61 MW gas at 117oF and 4psig.

Company Equipment ID: FLARE2

Company Equipment Description: FLARE2 / S-12. Emergency Overflow Expansion Flare.

Operating Status: Operating

Initial Construction Commencement 09/24/2008
Date:

Initial Operation Commencement 12/01/2010
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC018

Process Name: FLARE2 Pilots

Company Process Description: FLARE2

Source Classification Code (SCC): 3-06-009-04

Control equipment(s) directly associated with this process

FLA002

Release points(s) directly associated with this process

VER018

Emission Unit : FLR003

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FLR003

Emission Unit Type: Flare

Maximum Design Capacity: 1.0

Units : MMscf/hr

Minimum Design Capacity: 1.0

Units : MMscf/hr

Pilot Gas Volume (scf/min):

AQD Description: H21/S22 Truck Loadout Vapor Incinerator. Controls fugitive emissions from all loading racks (RACK, ISOTRCK, RESIDRACK, and RAIL.

Company Equipment ID: H-21

Company Equipment Description: H21/S22 Truck Loadout Incinerator

Operating Status: Operating

Initial Construction Commencement Date: 07/01/2000

Initial Operation Commencement Date: 07/01/2000

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC026

Process Name: H21/S22 Truck Loadout Incinerator

Company Process Description: H21/S22 Truck Loadout Incinerator

Source Classification Code (SCC): 3-06-009-03

Control equipment(s) directly associated with this process

FLA003

- **Emission Unit Information**

AQD Emissions Unit ID: FUG001

Emission Unit Type: Fugitive

AQD Description: WWTS / 24 - Wastewater Treatment System

Company Equipment ID: WWTS

Company Equipment Description: The waste water treatment system (WWTS) includes the existing drain system (EDRN), new drain system (NDRN), lift station (LIFT), oil-water separator/equalization/surge tand (SEP/EQ/SURGE), bioreactor tank (BIO), and WWT ponds (PONDS).

Operating Status: Operating

Initial Construction Commencement 05/11/1987
Date:

Initial Operation Commencement
Date:

Most Recent 03/17/2005
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC020

Process Name:

Company Process Description: WWTS / 24 - Wastewater Treatment System

Source Classification Code (SCC): 3-06-005-03

Release points(s) directly associated with this process

AVL002

Emission Unit : FUG002

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FUG002

Emission Unit Type: Fugitive

AQD Description: Crude Unit, CRUDE FUG

Company Equipment ID: CRUDE FUG

Company Equipment Description: Crude Unit, CRUDE FUG

Operating Status: Operating

Initial Construction Commencement

Date:

Initial Operation Commencement

Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC021

Process Name: Crude Unit VOC Fugitives

Company Process Description: CRUDE FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL001

Emission Unit : FUG003

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FUG003

Emission Unit Type: Fugitive

AQD Description: Alkylation Unit, ALKY FUG

Company Equipment ID: ALKY FUG

Company Equipment Description: Alkylation Unit, ALKY FUG

Operating Status: Operating

Initial Construction Commencement
Date:

Initial Operation Commencement
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC055

Process Name: Alkylation Unit VOC Fugitives

Company Process Description: ALKY FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL025

Emission Unit : FUG004

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FUG004

Emission Unit Type: Fugitive

AQD Description: Diesel Hydrotreater Unit, DHT FUG

Company Equipment ID: DHT FUG

Company Equipment Description: Diesel Hydrotreater Unit, DHT FUG

Operating Status: Operating

Initial Construction Commencement

Date:

Initial Operation Commencement

Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC056

Process Name: Diesel Hydrotreater Unit Fugitive VOCs

Company Process Description: DHT FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL026

Emission Unit : FUG005

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FUG005

Emission Unit Type: Fugitive

AQD Description: Naptha Hydrotreater Unit, NHT FUG

Company Equipment ID: NHT FUG

Company Equipment Description: Naptha Hydrotreater Unit, NHT FUG

Operating Status: Operating

Initial Construction Commencement

Date:

Initial Operation Commencement

Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC058

Process Name: Naptha Hydrotreater Unit VOC Fugitives

Company Process Description: NHT FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL028

Emission Unit : FUG006

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FUG006

Emission Unit Type: Fugitive

AQD Description: Reformer Unit, REFORM FUG

Company Equipment ID: REFORM FUG

Company Equipment Description: Reformer Unit, REFORM FUG

Operating Status: Operating

Initial Construction Commencement

Date:

Initial Operation Commencement

Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC059

Process Name: Reformer Unit Fugitive VOCs

Company Process Description: REFORM FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL029

Emission Unit : FUG007

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FUG007

Emission Unit Type: Fugitive

AQD Description: Tank Farm Fugitives, TANK FARM FUG

Company Equipment ID: TNK FRM FUG

Company Equipment Description: Tank Farm Fugitives, TANK FARM FUG

Operating Status: Operating

Initial Construction Commencement
Date:

Initial Operation Commencement
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC060

Process Name: Tank Farm Fugitive VOCs

Company Process Description: TANK FARM FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL030

Emission Unit : FUG008

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: FUG008

Emission Unit Type: Fugitive

AQD Description: Tanks Fugitives, TANKS FUG

Company Equipment ID: TANKS FUG

Company Equipment Description: Tanks Fugitives, TANKS FUG

Operating Status: Operating

Initial Construction Commencement

Date:

Initial Operation Commencement

Date:

Most Recent

Construction/Modification

Commencement Date:

Most Recent Operation

Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC061

Process Name: Tanks Fugitive VOCs

Company Process Description: TANKS FUG

Source Classification Code (SCC): 3-06-008-01

Release points(s) directly associated with this process

AVL031

Emission Unit : HET001

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: HET001

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 46.6

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H01 / S01 - Prefract Heater

Company Equipment ID: H-01

Company Equipment Description: Prefractionator Heater. Also serves as control device for VOCs and HAPs from LOCAT oxidizer vent stream and excess gas from depropanizer overhead (DPOH) accumulator vessel.

Operating Status: Operating

Initial Construction Commencement Date: 01/01/1950

Initial Operation Commencement Date: 01/01/1950

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC001

Process Name: H-01 Prefract Heater

Company Process Description: H01 / S01 - Prefract Heater

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER001

Emission Unit : HET002

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: HET002

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 42.0

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H02 / S04 - FCC Feed Heater

Company Equipment ID: H-02

Company Equipment Description: H02 / S04 - FCC Feed Heater - Old Prefract/FCC Feed. Unit is shut down and cannot be used under application for MD-1500. There are no plans to bring back the heater.

Operating Status: Permanently Shutdown

Shurdown Date: 10/12/2006

Shutdown Notification Date: 10/12/2006

Initial Construction Commencement 01/01/1960
Date:

Initial Operation Commencement 01/01/1960
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC002

Process Name: H02 / S04 - FCC Feed Heater

Company Process Description: H02 / S04 - FCC Feed Heater

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER002

Emission Unit : HET003

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: HET003

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 62.4

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H03 / S05/S06 - Crude Heater

Company Equipment ID: H-03

Company Equipment Description: H03 / S05/S06 - Crude Heater. Also serves as control device for wet gas compressor seal vent, for the vacuum unit steam educator vent, and for the FCCU compressor seals.

Operating Status: Operating

Initial Construction Commencement Date: 01/01/1963

Initial Operation Commencement Date: 01/01/1963

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC003

Process Name: H-03 Crude Heater

Company Process Description: H03 / S05/S06 - Crude Heater

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER003

VER023

Emission Unit : HET004

Aug 27 2015, 09:04:18

- Emission Unit Information

AQD Emissions Unit ID: HET004

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 23.0

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H06 / S08 - Alky Reboiler

Company Equipment ID: H-06

Company Equipment Description: H06 / S08 - Alky Reboiler

Operating Status: Operating

Initial Construction Commencement 01/01/1963
Date:

Initial Operation Commencement 01/01/1963
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC004

Process Name: H06 / S08 - Alky Reboiler

Company Process Description: H06 / S08 - Alky Reboiler

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER004

Emission Unit : HET005

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: HET005

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 18.5

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H11 / S13 - B2: Reformer Reheater #1

Company Equipment ID: H-11

Company Equipment Description: H11 / S13 - B2: Reformer Reheater #1

Operating Status: Operating

Initial Construction Commencement 01/01/1980
Date:

Initial Operation Commencement 01/01/1980
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC009

Process Name: H11 / S13 - B2: Reformer Reheater #1

Company Process Description: H11 / S13 - B2: Reformer Reheater #1

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER009

Emission Unit : HET006

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: HET006

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 15.0

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H12 / S14 - B3: Reformer Reheater #2

Company Equipment ID: H-12

Company Equipment Description: H12 / S14 - B3: Reformer Reheater #2

Operating Status: Operating

Initial Construction Commencement 01/01/1980
Date:

Initial Operation Commencement 01/01/1980
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC010

Process Name: H12 / S14 - B3: Reformer Reheater #2

Company Process Description: H12 / S14 - B3: Reformer Reheater #2

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER010

Emission Unit : HET007

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: HET007

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 7.0

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H13 / S15 - Reformer Reheater #2

Company Equipment ID: H-13

Company Equipment Description: H13 / S15 - Reformer Reheater #2

Operating Status: Permanently Shutdown

Shurdown Date: 11/19/2010

Shutdown Notification Date: 11/24/2010

Initial Construction Commencement 01/01/1980
Date:

Initial Operation Commencement 01/01/1980
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC011

Process Name: H13 / S15 - Reformer Reheater #2

Company Process Description: H13 / S15 - Reformer Reheater #2

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER011

Emission Unit : HET008

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: HET008

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 18.5

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H14 / S16 - HDS Heater

Company Equipment ID: H-14

Company Equipment Description: H14 / S16 - HDS Heater

Operating Status: Operating

Initial Construction Commencement 01/01/1993
Date:

Initial Operation Commencement 01/01/1993
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC012

Process Name: H14 / S16 - HDS Heater

Company Process Description: H14 / S16 - HDS Heater

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER012

Emission Unit : HET009

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: HET009

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 6.2

Units: MMBtu/hr

Primary Fuel Type: Pipeline Grade Natural Gas

Secondary Fuel Type: Propane

Heat Content of Fuel (BTU/scf): 980

AQD Description: H15 / S17 - Vacuum Flasher Heater

Company Equipment ID: H-15

Company Equipment Description: H15 / S17 - Vacuum Flasher Heater/Supplementary Crude Heater

Operating Status: Permanently Shutdown

Shutdown Date: 01/01/2014

Shutdown Notification Date: 05/21/2014

Initial Construction Commencement Date: 01/01/1995

Initial Operation Commencement Date:

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC013

Process Name: Vacuum Flasher Heater

Company Process Description: H15 / S17 - Vacuum Flasher Heater

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER013

Emission Unit : HET010

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: HET010

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 16.8

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H16 / S18 - NHT Heater

Company Equipment ID: H-16

Company Equipment Description: H16 / S18 - NHT Heater

Operating Status: Operating

Initial Construction Commencement 01/01/1996
Date:

Initial Operation Commencement 01/01/1996
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC014

Process Name: H16 / S18 - NHT Heater

Company Process Description: H16 / S18 - NHT Heater

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER014

Emission Unit : HET011

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: HET011

Emission Unit Type: Heater/Chiller

Firing Type: Indirect

Heat Input Rating: 35.2

Units: MMBtu/hr

Primary Fuel Type: Refinery Fuel Gas

Secondary Fuel Type: Pipeline Grade Natural Gas

Heat Content of Fuel (BTU/scf): 1020

AQD Description: H22 / S23 - B5: Reformer Preheater

Company Equipment ID: H-22

Company Equipment Description: H22 / S23 - B5: Reformer Preheater

Operating Status: Operating

Initial Construction Commencement 05/03/2006

Date:

Initial Operation Commencement 10/22/2010

Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC015

Process Name: H22 / S23 - B5: Reformer Preheater

Company Process Description: H22 / S23 - B5: Reformer Preheater

Source Classification Code (SCC): 3-06-001-06

Release points(s) directly associated with this process

VER015

Emission Unit : SRU001

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: SRU001

Emission Unit Type: Sulfur Recovery Unit

Maximum Annual Throughput: 1

Units: tons/yr

AQD Description: ATS Scrubber Vent / S-24 for Sour Water Ammonia to Ammonium Thiosulfate (SWAATS) Unit

Company Equipment ID: ATS VENT

Company Equipment Description: S24 / SWAATS Unit Scrubber Vent

Operating Status: Operating

Initial Construction Commencement Date: 05/09/2009

Initial Operation Commencement Date: 03/01/2013

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC027

Process Name: S24 / SWAATS Unit Scrubber Vent

Company Process Description: S24 / SWAATS Unit Scrubber Vent

Source Classification Code (SCC): 3-06-032-01

Control equipment(s) directly associated with this process

WSC002

Emission Unit : TNK001

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK001

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: #2 Diesel

Capacity: 1400

Units: barrels

Maximum Throughput: 720500.0000

Units: barrels/yr

AQD Description: Tank 20 (T-20)

Company Equipment ID: T-20

Company Equipment Description: Tank 20 (T-20)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC022

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank TK-20

Source Classification Code (SCC): 4-03-010-21

Release points(s) directly associated with this process

AVL004

- **Emission Unit Information**

AQD Emissions Unit ID: TNK002

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: #2 Diesel

Capacity: 1400

Units: barrels

Maximum Throughput: 810000.0000

Units: barrels/yr

AQD Description: Tank 21 (T-21)

Company Equipment ID: T-21

Company Equipment Description: Tank 21 (T-21)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC035

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-21

Source Classification Code (SCC): 4-03-010-21

Release points(s) directly associated with this process

AVL005

Emission Unit : TNK003

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK003

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Premium Gasoline

Capacity: 2200

Units: barrels

Maximum Throughput: 80000.0000

Units: barrels/yr

AQD Description: Tank 25 (T-25)

Company Equipment ID: T-25

Company Equipment Description: Tank 25 (T-25)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC036

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-25

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT001

Release points(s) directly associated with this process

AVL006

- **Emission Unit Information**

AQD Emissions Unit ID: TNK004

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: #2 Diesel

Capacity: 4770

Units: barrels

Maximum Throughput: 500000.0000

Units: barrels/yr

AQD Description: Tank 36 (T-36)

Company Equipment ID: T-36

Company Equipment Description: Tank 36 (T-36)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC037

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-36

Source Classification Code (SCC): 4-03-010-21

Release points(s) directly associated with this process

AVL007

- Emission Unit Information

AQD Emissions Unit ID: TNK005

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: #1 Diesel

Capacity: 2975

Units: barrels

Maximum Throughput: 350000.0000

Units: barrels/yr

AQD Description: Tank 40 (T-40)

Company Equipment ID: T-40

Company Equipment Description: Tank 40 (T-40)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC038

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-40

Source Classification Code (SCC): 4-03-010-21

Release points(s) directly associated with this process

AVL008

- **Emission Unit Information**

AQD Emissions Unit ID: TNK006

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: #2 Diesel

Capacity: 2975

Units: barrels

Maximum Throughput: 320000.0000

Units: barrels/yr

AQD Description: Tank 41 (T-41)

Company Equipment ID: T-41

Company Equipment Description: Tank 41 (T-41)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC039

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-41

Source Classification Code (SCC): 4-03-010-21

Release points(s) directly associated with this process

AVL009

Emission Unit : TNK007

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK007

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Unleaded Gasoline

Capacity: 24200

Units: barrels

Maximum Throughput: 1000000.0000

Units: barrels/yr

AQD Description: Tank 43 (T-43)

Company Equipment ID: T-43

Company Equipment Description: Tank 43 (T-43)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC040

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-43

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT002

Emission Unit : TNK008

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK008

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Unleaded Gasoline

Capacity: 23835

Units: barrels

Maximum Throughput: 700000.0000

Units: barrels/yr

AQD Description: Tank 46 (T-46)

Company Equipment ID: T-46

Company Equipment Description: Tank 46 (T-46)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC041

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-46

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT003

- **Emission Unit Information**

AQD Emissions Unit ID: TNK009

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Unleaded Gasoline

Capacity: 30925

Units: barrels

Maximum Throughput: 750000.0000

Units: barrels/yr

AQD Description: Tank 47 (T-47)

Company Equipment ID: T-47

Company Equipment Description: Tank 47 (T-47)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC042

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-47

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT004

Emission Unit : TNK010

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK010

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Premium Gasoline, any liquid with a RVP equal to or less than 15.0.

Capacity: 14645

Units: barrels

Maximum Throughput: 500000.0000

Units: barrels/yr

AQD Description: Tank 48 (T-48), New tank to replace Tank 44 which was destroyed by a fire. The tank has the ability to store hydrocarbon liquid

Company Equipment ID: T-48

Company Equipment Description: Tank 48 (T-48)

Operating Status: Operating

Initial Construction Commencement Date: 08/29/2011

Initial Operation Commencement Date: 12/28/2011

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC043

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-48

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT005

- Emission Unit Information

AQD Emissions Unit ID: TNK011

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Premium Gasoline

Capacity: 5200

Units: barrels

Maximum Throughput: 30000.0000

Units: barrels/yr

AQD Description: Tank 62 (T-62)

Company Equipment ID: T-62

Company Equipment Description: Tank 62 (T-62)

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC044

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-62

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT006

Emission Unit : TNK012

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK012

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Greasewood Crude

Capacity: 14225

Units: barrels

Maximum Throughput: 500000.0000

Units: barrels/yr

AQD Description: Tank 100 (T-100)

Company Equipment ID: T-100

Company Equipment Description: Tank 100 (T-100)

Operating Status: Operating

Initial Construction Commencement Date: 01/01/1969

Initial Operation Commencement Date: 01/01/1969

Most Recent Construction/Modification Commencement Date:

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC045

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-100

Source Classification Code (SCC): 4-03-010-12

Release points(s) directly associated with this process

AVL015

Emission Unit : TNK013

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK013

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Crude Oil

Capacity: 58420

Units: barrels

Maximum Throughput: 14000.0000

Units: barrels/day

AQD Description: Tank 102 (T-102), CTANK, Crude Oil Storage.

Company Equipment ID: T-102 CTANK

Company Equipment Description: Tank 102 (T-102), CTANK, Crude Oil Storage.

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC046

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-102

Source Classification Code (SCC): 4-03-011-10

Control equipment(s) directly associated with this process

FRT007

Emission Unit : TNK014

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK014

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: JP-8, Jet Fuel.

Capacity: 4900

Units: barrels

Maximum Throughput: 100000.0000

Units: barrels/yr

AQD Description: Tank 117 (T-117), Located in North Tank Farm

Company Equipment ID: T-117

Company Equipment Description: Tank 117 (T-117), Located in North Tank Farm

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC047

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-117

Source Classification Code (SCC): 4-03-010-18

Release points(s) directly associated with this process

AVL017

Emission Unit : TNK015

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK015

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: #2 Diesel

Capacity: 9550

Units: barrels

Maximum Throughput: 120000.0000

Units: barrels/yr

AQD Description: Tank 148 (T-148), Located in North Tank Farm

Company Equipment ID: T-148

Company Equipment Description: Tank 148 (T-148), Located in North Tank Farm

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC048

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-148

Source Classification Code (SCC): 4-03-010-21

Release points(s) directly associated with this process

AVL018

Emission Unit : TNK016

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK016

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Unleaded Gasoline

Capacity: 10040

Units: barrels

Maximum Throughput: 800000.0000

Units: barrels/yr

AQD Description: Tank 150 (T-150), Located in North Tank Farm

Company Equipment ID: T-150

Company Equipment Description: Tank 150 (T-150), Located in North Tank Farm

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC049

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-150

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT008

Emission Unit : TNK017

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK017

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: #1 Diesel

Capacity: 10050

Units: barrels

Maximum Throughput: 15000.0000

Units: barrels/yr

AQD Description: Tank 151 (T-151), Located in North Tank Farm

Company Equipment ID: T-151

Company Equipment Description: Tank 151 (T-151), Located in North Tank Farm

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC050

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-151

Source Classification Code (SCC): 4-03-010-21

Release points(s) directly associated with this process

AVL020

Emission Unit : TNK018

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK018

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Unleaded Gasoline

Capacity: 21725

Units: barrels

Maximum Throughput: 100000.0000

Units: barrels/yr

AQD Description: Tank 252 (T-252), Located in North Tank Farm

Company Equipment ID: T-252

Company Equipment Description: Tank 252 (T-252), Located in North Tank Farm

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC051

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-252

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT009

Emission Unit : TNK019

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK019

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: Ethanol or Gasoline Storage

Capacity: 10100

Units: barrels

Maximum Throughput: 20000.0000

Units: barrels/yr

AQD Description: Tank 140 (T-140), Ethanol or Gasoline Storage

Company Equipment ID: T-140

Company Equipment Description: Tank 140 (T-140), Ethanol or Gasoline Storage

Operating Status: Operating

Initial Construction Commencement 01/01/1969
Date:

Initial Operation Commencement 01/01/1969
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC052

Process Name: Refinery Tank VOC Fugitives

Company Process Description: Tank T-140

Source Classification Code (SCC): 4-03-011-97

Control equipment(s) directly associated with this process

FRT010

Emission Unit : TNK020

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK020

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: RVP 11.0 (Gasoline)

Capacity: 70000

Units: barrels

Maximum Throughput: 2400000.0000

Units: barrels/yr

AQD Description: New Tank 302 East (T-302). Located South of Refinery.

Company Equipment ID: T-302

Company Equipment Description: T-302 East Tank

Operating Status: Operating

Initial Construction Commencement 07/15/2013

Date:

Initial Operation Commencement 12/17/2014

Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC053

Process Name: Refinery Tank VOC Fugitives

Company Process Description: T-302

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT011

Emission Unit : TNK021

Aug 27 2015, 09:04:19

- Emission Unit Information

AQD Emissions Unit ID: TNK021

Emission Unit Type: Storage Tank/Silo

Material Type: Liquid

Description of Material Stored: RVP 11.0 (Diesel or Jet Fuel)

Capacity: 70000

Units: barrels

Maximum Throughput: 2400000.0000

Units: barrels/yr

AQD Description: New Tank 301 West (T-301). Located South of Refinery.

Company Equipment ID: T-301

Company Equipment Description: T-301

Operating Status: Operating

Initial Construction Commencement 07/15/2013
Date:

Initial Operation Commencement 12/17/2014
Date:

Most Recent
Construction/Modification
Commencement Date:

Most Recent Operation
Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC054

Process Name: Refinery Tank VOC Fugitives

Company Process Description: T-301

Source Classification Code (SCC): 4-03-011-80

Control equipment(s) directly associated with this process

FRT012

Control Equipment : FLA001

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Flare

Control Equipment ID: FLA001

AQD Description: Emergency Flare 1

Company Control Equipment ID: H-10/S-11

Company Control Equipment Description: Emergency Flare 1: John Zink STF-LH-127-18 Smokeless Forced Draft Flare.

Operating Status: Operating

Initial Installation Date: 01/01/1976

Manufacturer: John Zink STF-LH-127-18
Smokeless Forced Draft Fla

Model: John Zink STF-LH-127-18

- Specific Equipment Type information

Flare Type: Elevated - Open

Elevated Flare Type: Air-Assisted

Ignition Device: Yes

Flame Presence Sensor: Yes

Inlet Gas Temp: 150

Flame Presence Type: Thermocouple

Gas Flow Rate:

Sec. Outlet Gas Temp:

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
Hydrogen Sulfide	98	98	100	98
VOC - Volatile Organic Compounds	98	98	100	98

- Associated Control Equipments And Release Points

Control Equipment : FLA002

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Flare

Control Equipment ID: FLA002

AQD Description: FLARE2 Emergency Overflow Flare

Company Control Equipment ID: FLARE2

Company Control Equipment Description: FLARE2 Emergency Overflow Flare

Operating Status: Operating

Initial Installation Date: 12/01/2010

Manufacturer: Callidus Technologies

Model:

- Specific Equipment Type information

Flare Type: Elevated - Open

Elevated Flare Type: Air-Assisted

Ignition Device: Yes

Flame Presence Sensor: Yes

Inlet Gas Temp: 117

Flame Presence Type: Thermocouple

Gas Flow Rate:

Sec. Outlet Gas Temp:

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
Hydrogen Sulfide	98	98	100	98
VOC - Volatile Organic Compounds	98	98	100	98

- Associated Control Equipments And Release Points

Control Equipment : FLA003

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Flare

Control Equipment ID: FLA003

AQD Description: H21/S22 Truck Loadout Incinerator

Company Control Equipment ID: H-21

Company Control Equipment Description: H21/S22 Truck Loadout Incinerator

Operating Status: Operating

Initial Installation Date: 07/01/2000

Manufacturer:

Model:

- Specific Equipment Type information

Flare Type: Enclosed

Elevated Flare Type: Enclosed

Ignition Device: Yes

Flame Presence Sensor: Yes

Inlet Gas Temp:

Flame Presence Type: Thermocouple

Gas Flow Rate:

Sec. Outlet Gas Temp:

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	98	98	100	98

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

VER024

Control Equipment : FRT001

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT001

AQD Description: Tank 25 T-25 Floating Roof

Company Control Equipment ID: T-25 IFR

Company Control Equipment Description: Tank 25 T-25 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Control Equipment : FRT002

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT002

AQD Description: Tank 43 T-43 Floating Roof

Company Control Equipment ID: T-43 IFR

Company Control Equipment Description: Tank 43 T-43 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL010

Control Equipment : FRT003

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT003

AQD Description: Tank 46 T-46 Floating Roof

Company Control Equipment ID: T-46 IFR

Company Control Equipment Description: Tank 46 T-46 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL011

Control Equipment : FRT004

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Other

Control Equipment ID: FRT004

AQD Description: Tank 47 T-47 Floating Roof

Company Control Equipment ID: T-47 IFR

Company Control Equipment Description: None.

Description:

Operating Status: Not Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	75	75	0	0

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL012

Control Equipment : FRT005

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT005

AQD Description: Tank 48 T-48 Floating Roof. Internal Floating Roof (vapor mounted, wiper seal).

Company Control Equipment ID: T-48 IFR

Company Control Equipment Description: Tank 48 T-48 Floating Roof. Internal Floating Roof (vapor mounted, wiper seal).

Operating Status: Operating

Initial Installation Date: 12/28/2011

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	95	95	100	95

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL013

Control Equipment : FRT006

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT006

AQD Description: Tank 62 T-62 Floating Roof

Company Control Equipment ID: T-62 IFR

Company Control Equipment Description: Tank 62 T-62 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL014

Control Equipment : FRT007

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT007

AQD Description: Tank 102 T-102 Floating Roof

Company Control Equipment ID: T-102 IFR

Company Control Equipment Description: Tank 102 T-102 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL016

Control Equipment : FRT008

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT008

AQD Description: Tank 150 T-150 Floating Roof

Company Control Equipment ID: T-150 IFR

Company Control Equipment Description: Tank 150 T-150 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL019

Control Equipment : FRT009

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT009

AQD Description: Tank 252 T-252 Floating Roof

Company Control Equipment ID: T-252 IFR

Company Control Equipment Description: Tank 252 T-252 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL021

Control Equipment : FRT010

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT010

AQD Description: Tank 140 T-140 Floating Roof

Company Control Equipment ID: T-140 IFR

Company Control Equipment Description: Tank 140 T-140 Floating Roof

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL022

Control Equipment : FRT011

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT011

AQD Description: New Tank 302 East (T-302). Located South of Refinery.

Company Control Equipment ID: T-302 FR

Company Control Equipment
Description: T-302

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL023

Control Equipment : FRT012

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Floating Roof

Control Equipment ID: FRT012

AQD Description: New Tank 301 West (T-301). Located South of Refin

Company Control Equipment ID: T-301 FR

Company Control Equipment T-301
Description:

Operating Status: Operating

Initial Installation Date:

Manufacturer:

Model:

- Specific Equipment Type information

Internal Floating Roof?: Yes

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
VOC - Volatile Organic Compounds	90	90	100	90

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

AVL024

Control Equipment : WSC001

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Wet Scrubber

Control Equipment ID: WSC001

AQD Description: Wet Gas Scrubber. Controls emissions from H-19 (FCC Preheater), H-20 (CO Furnace), and FCC Regenerator (FCC)

Company Control Equipment ID: WGS

Company Control Equipment Reverse Jet, Wet Gas Scrubber.
Description:

Operating Status: Operating

Initial Installation Date: 07/01/2010

Manufacturer: MECS DynaWave

Model:

- Specific Equipment Type information

Wet Scrubber Type: Spray Chamber

Operating Pressure Drop Range: 0.77

pH Range for Scrubbing Liquid:

Scrubber Liquid Recirculated: Yes

Scrubber Liquid Flow Rate:

Scrubber Liquid Supply Pressure: 14.3

Inlet Gas Flow Rate:

Outlet Gas Flow Rate:

Inlet Gas Temp:

Sec. Outlet Gas Temp:

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
PM - Primary PM (Includes Filterables + Condensibles)	85	99	100	99
SO2 - Sulfur Dioxide	98	100	100	100

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

VER017

Control Equipment : WSC002

Aug 27 2015, 09:04:19

- Control Equipment Information

Equipment Type: Wet Scrubber

Control Equipment ID: WSC002

AQD Description: Tail Gases from the SWAATS Unit go through a vent scrubber before being vented to the atmosphere and only SO2 emissions are emitted.

Company Control Equipment ID: ATS Scrubber

Company Control Equipment Description: Tail Gases from the SWAATS Unit go through a vent scrubber before being vented to the atmosphere and only SO2 emissions are emitted.

Operating Status: Operating

Initial Installation Date:

Manufacturer: ThioSolv

Model: SWAATS

- Specific Equipment Type information

Wet Scrubber Type: Other

Operating Pressure Drop Range: 1

pH Range for Scrubbing Liquid: 6.05

Scrubber Liquid Recirculated: 6.05

Scrubber Liquid Flow Rate: 50

Scrubber Liquid Supply Pressure: 12.9

Inlet Gas Flow Rate:

Outlet Gas Flow Rate:

Inlet Gas Temp:

Sec. Outlet Gas Temp: 156

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
SO2 - Sulfur Dioxide	99	99	100	99

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

VER025

Release Point : AVL025

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL025

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Alkylation Unit, ALKY FUG

Company Release Point ID: ALKY FUG

Company Release Point Description: Alkylation Unit, ALKY FUG

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.84965

Longitude: -104.21528

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL003

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL003

Release Type: Fugitive (Area, Volume, Line)

AQD Description: COOL / 23 - Cooling Towers [RP ID Changed Log] 10/29/2014 11:51:38, VER019 >>
AVL003.

Company Release Point ID: COOL

Company Release Point Description: Cooling Towers

Operating Status: Operating

Release Height (ft): 26.25

- Release Latitude and Longitude

Latitude: 43.85001

Longitude: -104.21578

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL001

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL001

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Crude Unit, CRUDE FUG

Company Release Point ID: CRUDE FUG

Company Release Point Description: Crude Unit, CRUDE FUG

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.84999

Longitude: -104.21527

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL026

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL026

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Diesel Hydrotreater Unit, DHT FUG

Company Release Point ID: DHT FUG

Company Release Point Description: Diesel Hydrotreater Unit, DHT FUG

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.84981

Longitude: -104.21412

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL027

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL027

Release Type: Fugitive (Area, Volume, Line)

AQD Description: FCC Unit VOC Fugitives

Company Release Point ID: FCC FUG

Company Release Point Description: FCC Unit VOC Fugitives

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.84992

Longitude: -104.21507

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER018

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER018

Release Type: Vertical

AQD Description: FLARE - Flare Pilots

Company Release Point ID: FLARE2

Company Release Point Description: Emergency Expansion Overflow Flare. Capacity is anything over 44,000 lb/hr of 65 Mw light olefin gas at 105oF and 5psig, which is the capacity of the main flare.

Operating Status: Operating

Base Elevation (ft): 4252.0

- Stack Details

Stack Height (ft): 150.0

Stack Diameter (ft): 2.0

Exit Gas Velocity (ft/s): 0.58

Exit Gas Flow Rate (acfm): 0.0

Exit Gas Temp (F): 900.0

- Release Latitude and Longitude

Latitude: 43.84839

Longitude: -104.21287

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL028

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL028

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Naptha Hydrotreater Unit, NHT FUG

Company Release Point ID: NHT FUG

Company Release Point Description: Naptha Hydrotreater Unit, NHT FUG

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.85021

Longitude: -104.21509

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL029

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL029

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Reformer Unit, REFORM FUG

Company Release Point ID: REFORM FUG

Company Release Point Description: Reformer Unit, REFORM FUG

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.85009

Longitude: -104.21403

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER001

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER001

Release Type: Vertical

AQD Description: H01 / S01 - Prefract Heater Stack

Company Release Point ID: S-01

Company Release Point Description: H01 / S01 - Prefract Heater Stack

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 73.0

Stack Diameter (ft): 3.7

Exit Gas Velocity (ft/s): 46.4

Exit Gas Flow Rate (acfm): 25013.0

Exit Gas Temp (F): 605.0

- Release Latitude and Longitude

Latitude: 43.85027

Longitude: -104.21477

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER002

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER002

Release Type: Vertical

AQD Description: H02 / S04 - FCC Feed Heater

Company Release Point ID: S-04

Company Release Point Description: Stack for FCC Feed Heater

Operating Status: Not Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 65.0

Stack Diameter (ft): 4.5

Exit Gas Velocity (ft/s): 42.2

Exit Gas Flow Rate (acfm): 0.0

Exit Gas Temp (F): 1144.0

- Release Latitude and Longitude

Latitude: 43.84845

Longitude: -104.21436

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER003

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER003

Release Type: Vertical

AQD Description: H03 / S05 - Crude Heater West Stack

Company Release Point ID: S-05 West

Company Release Point Description: H03 / S05 - Crude Heater West Stack

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 52.0

Stack Diameter (ft): 3.67

Exit Gas Velocity (ft/s): 49.2

Exit Gas Flow Rate (acfm): 25000.0

Exit Gas Temp (F): 1500.0

- Release Latitude and Longitude

Latitude: 43.85012

Longitude: -104.21507

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER023

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER023

Release Type: Vertical

AQD Description: H03 / S06 - Crude Heater East Stack

Company Release Point ID: S-06 East

Company Release Point Description: H03 / S06 - Crude Heater East Stack

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 52.0

Stack Diameter (ft): 3.67

Exit Gas Velocity (ft/s): 49.2

Exit Gas Flow Rate (acfm): 25000.0

Exit Gas Temp (F): 1450.0

- Release Latitude and Longitude

Latitude: 43.85012

Longitude: -104.21506

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER004

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER004

Release Type: Vertical

AQD Description: H06 / S08 - Alky Reboiler

Company Release Point ID: S-08

Company Release Point Description: H06 / S08 - Alky Reboiler

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 58.5

Stack Diameter (ft): 2.53

Exit Gas Velocity (ft/s): 38.0

Exit Gas Flow Rate (acfm): 14500.0

Exit Gas Temp (F): 815.0

- Release Latitude and Longitude

Latitude: 43.84967

Longitude: -104.21546

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER005

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER005

Release Type: Vertical

AQD Description: H07 / S09 - Boiler #1

Company Release Point ID: S-09

Company Release Point Description: Boiler #1 normally only used for startup or for combustion of excess fuel gas.

Operating Status: Not Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 90.0

Stack Diameter (ft): 90.0

Exit Gas Velocity (ft/s): 13.11

Exit Gas Flow Rate (acfm): 28808.0

Exit Gas Temp (F): 1470.0

- Release Latitude and Longitude

Latitude: 43.8507

Longitude: -104.21491

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER007

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER007

Release Type: Vertical

AQD Description: H09 / S10 - Boiler #3

Company Release Point ID: S-10

Company Release Point Description: Stack S-10

Operating Status: Not Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 90.0

Stack Diameter (ft): 4.0

Exit Gas Velocity (ft/s): 5.82

Exit Gas Flow Rate (acfm): 14404.0

Exit Gas Temp (F): 1470.0

- Release Latitude and Longitude

Latitude: 43.8507

Longitude: -104.21494

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER008

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER008

Release Type: Vertical

AQD Description: H10 / S11 - Flare Pilots

Company Release Point ID: S-11

Company Release Point Description: Main Flare. Current capacity is 44,000 lb/hr of 65 Mw light olefin gas at 105oF and 5psig.

Operating Status: Operating

Base Elevation (ft): 4256.0

- Stack Details

Stack Height (ft): 60.0

Stack Diameter (ft): 3.0

Exit Gas Velocity (ft/s): 10.97

Exit Gas Flow Rate (acfm): 1700.0

Exit Gas Temp (F): 1810.0

- Release Latitude and Longitude

Latitude: 43.84811

Longitude: -104.21616

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER009

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER009

Release Type: Vertical

AQD Description: H11 / S13 - B2: Reformer Reheater #1 Stack

Company Release Point ID: S-13

Company Release Point Description: H11 / S13 - B2: Reformer Reheater #1 Stack

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 48.0

Stack Diameter (ft): 3.94

Exit Gas Velocity (ft/s): 17.0

Exit Gas Flow Rate (acfm): 12250.0

Exit Gas Temp (F): 566.0

- Release Latitude and Longitude

Latitude: 43.85024

Longitude: -104.21402

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER010

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER010

Release Type: Vertical

AQD Description: H12 / S14 - B3: Reformer Reheater #2 Stack

Company Release Point ID: S-14

Company Release Point Description: H12 / S14 - B3: Reformer Reheater #2 Stack

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 48.0

Stack Diameter (ft): 3.44

Exit Gas Velocity (ft/s): 11.7

Exit Gas Flow Rate (acfm): 7600.0

Exit Gas Temp (F): 700.0

- Release Latitude and Longitude

Latitude: 43.8502

Longitude: -104.21403

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER011

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER011

Release Type: Vertical

AQD Description: H13 / S15 - Reformer Reheater #2 Stack

Company Release Point ID: S-15

Company Release Point Description: H13 / S15 - Reformer Reheater #2 Stack

Operating Status: Operating

Base Elevation (ft): 4268.0

- Stack Details

Stack Height (ft): 34.0

Stack Diameter (ft): 2.58

Exit Gas Velocity (ft/s): 40.0

Exit Gas Flow Rate (acfm): 12500.0

Exit Gas Temp (F): 1022.0

- Release Latitude and Longitude

Latitude: 43.85018

Longitude: -104.21403

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER012

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER012

Release Type: Vertical

AQD Description: H14 / S16 - HDS Heater Stack

Company Release Point ID: S-16

Company Release Point Description: H14 / S16 - HDS Heater Stack

Operating Status: Operating

Base Elevation (ft): 4270.0

- Stack Details

Stack Height (ft): 50.0

Stack Diameter (ft): 2.4

Exit Gas Velocity (ft/s): 26.0

Exit Gas Flow Rate (acfm): 8636.0

Exit Gas Temp (F): 800.0

- Release Latitude and Longitude

Latitude: 43.84969

Longitude: -104.21419

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER014

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER014

Release Type: Vertical

AQD Description: H16 / S18 - NHT Heater Stack

Company Release Point ID: S-16

Company Release Point Description: H16 / S18 - NHT Heater Stack

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 74.0

Stack Diameter (ft): 0.76

Exit Gas Velocity (ft/s): 30.0

Exit Gas Flow Rate (acfm): 8600.0

Exit Gas Temp (F): 950.0

- Release Latitude and Longitude

Latitude: 43.85026

Longitude: -104.21499

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER013

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER013

Release Type: Vertical

AQD Description: H15 / S17 - Vacuum Flasher Heater Stack

Company Release Point ID: S-17

Company Release Point Description: H15 / S17 - Vacuum Flasher Heater Stack

Operating Status: Not Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 62.0

Stack Diameter (ft): 2.3

Exit Gas Velocity (ft/s): 41.3

Exit Gas Flow Rate (acfm): 5585.0

Exit Gas Temp (F): 960.0

- Release Latitude and Longitude

Latitude: 43.85035

Longitude: -104.21499

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER016

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER016

Release Type: Vertical

AQD Description: H18 / S20 - Boiler #4

Company Release Point ID: S-20

Company Release Point Description: Removed

Operating Status: Not Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 10.0

Stack Diameter (ft): 1.5

Exit Gas Velocity (ft/s): 16.41

Exit Gas Flow Rate (acfm): 1738.0

Exit Gas Temp (F): 750.0

- Release Latitude and Longitude

Latitude: 43.84857

Longitude: -104.21429

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER017

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER017

Release Type: Vertical

AQD Description: FCC / S21 - FCC preheater, CO Furnace, and FCC Regenerator common stack.

Company Release Point ID: S-21

Company Release Point Description: FCC preheater, CO Furnace, and FCC Regenerator combined stack with a wet gas scrubber.

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 87.5

Stack Diameter (ft): 3.83

Exit Gas Velocity (ft/s): 60.0

Exit Gas Flow Rate (acfm): 43000.0

Exit Gas Temp (F): 145.0

- Release Latitude and Longitude

Latitude: 43.85005

Longitude: -104.21523

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
Monitor Lab T-300 CO Analyzer				X									
Monitor Labs ML M200EH NOx Analyzer			X										
Monitor Labs ML M100E SO2 Analyzer		X											

Release Point : VER024

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER024

Release Type: Vertical

AQD Description: H21/S22 Truck Loadout Incinerator [RP ID Changed Log] 11/12/2014 16:26:05, HOR001 >> VER024.

Company Release Point ID: S-22

Company Release Point Description: H21/S22 Truck Loadout Incinerator

Operating Status: Operating

Base Elevation (ft): 4274.0

- Stack Details

Stack Height (ft): 15.0

Stack Diameter (ft): 5.79

Exit Gas Velocity (ft/s): 6.0

Exit Gas Flow Rate (acfm): 9460.0

Exit Gas Temp (F): 560.0

- Release Latitude and Longitude

Latitude: 43.85041

Longitude: -104.21346

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER015

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER015

Release Type: Vertical

AQD Description: H22 / S23 - B5: Reformer Preheater Stack

Company Release Point ID: S-23

Company Release Point Description: H22 / S23 - B5: Reformer Preheater Stack

Operating Status: Operating

Base Elevation (ft): 4268.0

- Stack Details

Stack Height (ft): 53.5

Stack Diameter (ft): 3.5

Exit Gas Velocity (ft/s): 20.0

Exit Gas Flow Rate (acfm): 9400.0

Exit Gas Temp (F): 400.0

- Release Latitude and Longitude

Latitude: 43.85019

Longitude: -104.21388

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER022

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER022

Release Type: Vertical

AQD Description: H-23 Indeck Boiler Stack S-25

Company Release Point ID: S-25

Company Release Point Description: H-23 Indeck Boiler Stack S-25

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 20.0

Stack Diameter (ft): 2.03

Exit Gas Velocity (ft/s): 20.17

Exit Gas Flow Rate (acfm): 15687.0

Exit Gas Temp (F): 880.0

- Release Latitude and Longitude

Latitude: 43.85069

Longitude: -104.21495

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER026

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER026

Release Type: Vertical

AQD Description: GEN-1 Emergency Diesel Generator 1 Stack (S-26)

Company Release Point ID: S-26

Company Release Point Description: GEN-1 Emergency Diesel Generator 1 Stack (S-26)

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 10.5

Stack Diameter (ft): 0.4

Exit Gas Velocity (ft/s): 390.0

Exit Gas Flow Rate (acfm): 13500.0

Exit Gas Temp (F): 1000.0

- Release Latitude and Longitude

Latitude: 43.84975

Longitude: -104.21611

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER027

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER027

Release Type: Vertical

AQD Description: GEN-2 Emergency Diesel Generator 2 Stack (S-27)

Company Release Point ID: S-27

Company Release Point Description: GEN-2 Emergency Diesel Generator 2 Stack (S-27)

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 8.7

Stack Diameter (ft): 0.4

Exit Gas Velocity (ft/s): 250.0

Exit Gas Flow Rate (acfm): 7570.0

Exit Gas Temp (F): 900.0

- Release Latitude and Longitude

Latitude: 43.85049

Longitude: -104.2151

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER028

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER028

Release Type: Vertical

AQD Description: GEN-3 Emergency Diesel Generator 3 Stack (S-28)

Company Release Point ID: S-28

Company Release Point Description: GEN-3 Emergency Diesel Generator 3 Stack (S-28)

Operating Status: Operating

Base Elevation (ft): 4269.0

- Stack Details

Stack Height (ft): 8.7

Stack Diameter (ft): 0.4

Exit Gas Velocity (ft/s): 250.0

Exit Gas Flow Rate (acfm): 7570.0

Exit Gas Temp (F): 900.0

- Release Latitude and Longitude

Latitude: 43.84964

Longitude: -104.21478

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER030

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER030

Release Type: Vertical

AQD Description: Fire-1. Fire Pump Engine - South (S-29)

Company Release Point ID: S-29

Company Release Point Description: Fire-1. Fire Pump Engine - South (S-29)

Operating Status: Operating

Base Elevation (ft): 4278.0

- Stack Details

Stack Height (ft): 11.0

Stack Diameter (ft): 0.5

Exit Gas Velocity (ft/s): 188.0

Exit Gas Flow Rate (acfm): 8600.0

Exit Gas Temp (F): 825.0

- Release Latitude and Longitude

Latitude: 43.8482

Longitude: -104.21171

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER031

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER031

Release Type: Vertical

AQD Description: Fire-2. Fire Pump Engine - North (S-30)

Company Release Point ID: S-30

Company Release Point Description: Fire-2. Fire Pump Engine - North (S-30)

Operating Status: Operating

Base Elevation (ft): 4278.0

- Stack Details

Stack Height (ft): 11.0

Stack Diameter (ft): 0.43

Exit Gas Velocity (ft/s): 309.0

Exit Gas Flow Rate (acfm): 10580.0

Exit Gas Temp (F): 880.0

- Release Latitude and Longitude

Latitude: 43.84826

Longitude: -104.21176

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER029

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER029

Release Type: Vertical

AQD Description: OCC Emergency Generator (S-36)

Company Release Point ID: S-36

Company Release Point Description: OCC Emergency Generator (S-36)

Operating Status: Operating

Base Elevation (ft): 4301.0

- Stack Details

Stack Height (ft): 6.7

Stack Diameter (ft): 0.2

Exit Gas Velocity (ft/s): 330.0

Exit Gas Flow Rate (acfm): 2400.0

Exit Gas Temp (F): 1070.0

- Release Latitude and Longitude

Latitude: 43.84959

Longitude: -104.21156

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER032

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER032

Release Type: Vertical

AQD Description: Biotank Back-up Blower Engine Stack. (S-37)

Company Release Point ID: S-37

Company Release Point Description: Biotank Back-up Blower Engine Stack. (S-37)

Operating Status: Operating

Base Elevation (ft): 4281.0

- Stack Details

Stack Height (ft): 4.2

Stack Diameter (ft): 0.16

Exit Gas Velocity (ft/s): 204.0

Exit Gas Flow Rate (acfm): 1040.0

Exit Gas Temp (F): 200.0

- Release Latitude and Longitude

Latitude: 43.84908

Longitude: -104.21266

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER025

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: VER025

Release Type: Vertical

AQD Description: SWAATS Vent

Company Release Point ID: SWAATS Vent

Company Release Point Description: SWAATS Vent

Operating Status: Operating

Base Elevation (ft): 4264.0

- Stack Details

Stack Height (ft): 42.5

Stack Diameter (ft): 2.0

Exit Gas Velocity (ft/s): 1.25

Exit Gas Flow Rate (acfm): 943.0

Exit Gas Temp (F): 156.0

- Release Latitude and Longitude

Latitude: 43.84889

Longitude: -104.21526

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL015

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL015

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-100 VOC Fugitives

Company Release Point ID: T-100

Company Release Point Description: Tank T-100 VOC Fugitives

Operating Status: Operating

Release Height (ft): 34.08

- Release Latitude and Longitude

Latitude: 43.85049

Longitude: -104.21268

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL016

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL016

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-102 VOC Fugitives

Company Release Point ID: T-102

Company Release Point Description: Tank T-102 VOC Fugitives

Operating Status: Operating

Release Height (ft): 30.99

- Release Latitude and Longitude

Latitude: 43.85004

Longitude: -104.21277

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL017

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL017

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-117 VOC Fugitives, North Tank Farm

Company Release Point ID: T-117

Company Release Point Description: Tank T-117 VOC Fugitives, North Tank Farm

Operating Status: Operating

Release Height (ft): 28.67

- Release Latitude and Longitude

Latitude: 43.85229

Longitude: -104.2165

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL022

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL022

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-140 VOC Fugitives, Located in North Tank Farm

Company Release Point ID: T-140

Company Release Point Description: Tank T-140 VOC Fugitives, Located in North Tank Farm.

Operating Status: Operating

Release Height (ft): 28.83

- Release Latitude and Longitude

Latitude: 43.85152

Longitude: -104.21643

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL018

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL018

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-148 VOC Fugitives, North Tank Farm

Company Release Point ID: T-148

Company Release Point Description: Tank T-148 VOC Fugitives, North Tank Farm

Operating Status: Operating

Release Height (ft): 30.58

- Release Latitude and Longitude

Latitude: 43.85162

Longitude: -104.21581

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL019

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL019

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-150 VOC Fugitives, North Tank Farm

Company Release Point ID: T-150

Company Release Point Description: Tank T-150 VOC Fugitives, North Tank Farm

Operating Status: Operating

Release Height (ft): 35.71

- Release Latitude and Longitude

Latitude: 43.85195

Longitude: -104.21583

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL020

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL020

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-151 VOC Fugitives, North Tank Farm

Company Release Point ID: T-151

Company Release Point Description: Tank T-151 VOC Fugitives, North Tank Farm

Operating Status: Operating

Release Height (ft): 35.5

- Release Latitude and Longitude

Latitude: 43.85231

Longitude: -104.2159

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL006

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL006

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-25 VOC Fugitives

Company Release Point ID: T-25

Company Release Point Description: Tank T-25 VOC Fugitives

Operating Status: Operating

Release Height (ft): 19.94

- Release Latitude and Longitude

Latitude: 43.84954

Longitude: -104.21363

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL021

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL021

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-252 VOC Fugitives, North Tank Farm

Company Release Point ID: T-252

Company Release Point Description: Tank T-252 VOC Fugitives, North Tank Farm

Operating Status: Operating

Release Height (ft): 34.75

- Release Latitude and Longitude

Latitude: 43.85283

Longitude: -104.2168

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL024

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL024

Release Type: Fugitive (Area, Volume, Line)

AQD Description: New Tank 301 West (T-301). Located South of Refin

Company Release Point ID: T-301

Company Release Point Description: T-301

Operating Status: Operating

Release Height (ft): 47.0

- Release Latitude and Longitude

Latitude: 43.84587

Longitude: -104.21546

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL023

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL023

Release Type: Fugitive (Area, Volume, Line)

AQD Description: New Tank 302 East (T-302). Located South of Refinery.

Company Release Point ID: T-302

Company Release Point Description: T-302

Operating Status: Operating

Release Height (ft): 47.0

- Release Latitude and Longitude

Latitude: 43.84589

Longitude: -104.21467

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL007

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL007

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-36 VOC Fugitives

Company Release Point ID: T-36

Company Release Point Description: Tank T-36 VOC Fugitives

Operating Status: Operating

Release Height (ft): 28.0

- Release Latitude and Longitude

Latitude: 43.85098

Longitude: -104.21276

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL008

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL008

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-40 VOC Fugitives

Company Release Point ID: T-40

Company Release Point Description: Tank T-40 VOC Fugitives

Operating Status: Operating

Release Height (ft): 23.0

- Release Latitude and Longitude

Latitude: 43.85106

Longitude: -104.21252

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL009

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL009

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-41 VOC Fugitives

Company Release Point ID: T-41

Company Release Point Description: Tank T-41 VOC Fugitives

Operating Status: Operating

Release Height (ft): 23.0

- Release Latitude and Longitude

Latitude: 43.85095

Longitude: -104.21256

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL010

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL010

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-43 VOC Fugitives

Company Release Point ID: T-43

Company Release Point Description: Tank T-43 VOC Fugitives

Operating Status: Operating

Release Height (ft): 27.08

- Release Latitude and Longitude

Latitude: 43.8488

Longitude: -104.21456

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL011

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL011

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-46 VOC Fugitives

Company Release Point ID: T-46

Company Release Point Description: Tank T-46 VOC Fugitives

Operating Status: Operating

Release Height (ft): 39.11

- Release Latitude and Longitude

Latitude: 43.84861

Longitude: -104.21336

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL012

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL012

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-47 VOC Fugitives

Company Release Point ID: T-47

Company Release Point Description: Tank T-47 VOC Fugitives

Operating Status: Operating

Release Height (ft): 33.83

- Release Latitude and Longitude

Latitude: 43.84814

Longitude: -104.21348

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL013

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL013

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-48 VOC Fugitives

Company Release Point ID: T-48

Company Release Point Description: Tank T-48 VOC Fugitives

Operating Status: Operating

Release Height (ft): 40.0

- Release Latitude and Longitude

Latitude: 43.84835

Longitude: -104.21469

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL014

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL014

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-62 VOC Fugitives

Company Release Point ID: T-62

Company Release Point Description: Tank T-62 VOC Fugitives

Operating Status: Operating

Release Height (ft): 25.08

- Release Latitude and Longitude

Latitude: 43.8497

Longitude: -104.21355

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL031

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL031

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tanks Fugitives, TANKS FUG

Company Release Point ID: TANKS FUG

Company Release Point Description: Tanks Fugitives, TANKS FUG

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.85255

Longitude: -104.21624

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL004

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL004

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-20 VOC Fugitives [RP ID Changed Log] 11/13/2014 09:48:25, VER021 >> AVL004.

Company Release Point ID: TK-20

Company Release Point Description: Tank T-20 VOC Fugitives

Operating Status: Operating

Release Height (ft): 16.0

- Release Latitude and Longitude

Latitude: 43.85001

Longitude: -104.21362

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL005

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL005

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank T-21 VOC Fugitives

Company Release Point ID: TK-21

Company Release Point Description: Tank T-21 VOC Fugitives

Operating Status: Operating

Release Height (ft): 16.0

- Release Latitude and Longitude

Latitude: 43.84989

Longitude: -104.21365

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL030

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL030

Release Type: Fugitive (Area, Volume, Line)

AQD Description: Tank Farm Fugitives, TANK FARM FUG

Company Release Point ID: TNK FRM FUG

Company Release Point Description: Tank Farm Fugitives, TANK FARM FUG

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.84942

Longitude: -104.21363

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL002

Aug 27 2015, 09:04:19

- Release Point Information

Release Point ID: AVL002

Release Type: Fugitive (Area, Volume, Line)

AQD Description: WWTS / 24 - Wastewater Treatment System [RP ID Changed Log] 10/29/2014 11:27:04, VER020 >> AVL002.

Company Release Point ID: WWTS

Company Release Point Description: 102 gallons/minute.

Operating Status: Operating

Release Height (ft): 1.0

- Release Latitude and Longitude

Latitude: 43.84839

Longitude: -104.21286

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Hermes Consolidated, LLC

dba Wyoming Refining Company

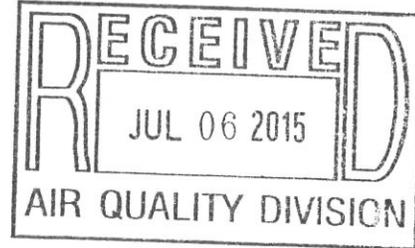
Corporate Headquarters

1600 Broadway Suite 1550 ~ Denver CO 80202

Phone 303-894-9966 ~ Fax 303-837-9089

July 2, 2015

NSR Permitting Program (Application)
WY Dept. of Environmental Quality
Air Quality Division
Herschler Building 2-E
122 West 25th Street
Cheyenne, WY 82002



RE: NSR Application (A0000797) – Tank 47 BACT Cost Calculations

Sirs,

As requested by the Division, Wyoming Refining Company (“WRC”) investigated the cost of installing a vapor combustor on the referenced Tank 47. The results of that investigation are enclosed. The costs were derived from the enclosed estimate provided by an equipment vendor and, with respect to installation costs, WRC’s project engineering staff.

The vendor has qualified its estimate with this language, “This is a budgetary proposal and is intended only as an estimate to facilitate your planning processes and does not constitute a commitment or offer to sell goods or services at the prices and terms referenced herein.” In addition, the installation estimate did not include sealing the tank, any required emissions monitoring, natural gas costs and operating and maintenance expenses. To address these uncertainties, a twenty-five percent contingency was added to the capital costs and a one percent of capital rule of thumb was used to estimate annual operations and maintenance expense. Our current cost of capital is 8%, and we assigned a 15 year economic life to the control equipment. The result is an emission control cost of \$7,297 per ton of VOC. To be conservative, 100% VOC destruction efficiency was assumed.

WRC respectfully submits that, considering these costs, emission controls for diesel storage in Tank 47 are not economically reasonable. Please feel free to contact me if there are any questions.

Sincerely,

Bob Neufeld, Vice President
Environment & Government Relations

enclosures (2)

cc w/ enc: WRC – Mike Baldwin, Shane Crawford, Staci Hammond, Mike Farnsworth

wrn

Cost Estimate and BACT Analysis: Tank 47 Gasoline to Diesel Conversion		
Item	Detail	Cost
John Zink Vapor Combustion Unit		\$93,000
Dirt Work		15,000
Gravel		10,000
Concrete	30' x 30' @ \$500/yd	10,000
Pipe Supports	180 hrs @ \$150	27,000
Natural Gas Piping	1,000' @ \$16 Fittings @ 40%	24,000
Labor	1,000': 400 hrs @ \$150 50 sections: 100+ welds	60,000
Tank Piping & Blowers	Blowers	30,000
	Vapor Collection	40,000
	Vacuum Breaker	20,000
Electrical		30,000
Subtotal		\$359,000
25% Contingency		89,750
Total		\$448,750
Capital Recovery Cost		52,427
Annual O&M		4,488
Total Annual Cost		56,915
Control Cost per Ton	@7.8 tpy	\$7,297



**JOHN ZINK® ENCLOSED
VAPOR COMBUSTION UNIT**

Budget Proposal prepared for
Wyoming Refining Company

June 29, 2015

John Zink Company, LLC is pleased to provide this proposal for a JOHN ZINK® Vapor Combustion Unit (VCU) to be located at Wyoming Refining Co. petroleum products terminal in New Castle, WY.

John Zink is a global leader in developing next-generation technology with over 2000 John Zink® brand vapor control systems in over 40 countries. Our Vapor Combustion Systems meet the most stringent worldwide safety and emission standards, while providing valuable technical expertise throughout execution and installation of your project.

Through the execution of hundreds of vapor control projects, John Zink has developed a thorough understanding that our customers value safety, efficiency, and ease of installation, operation and maintenance in their equipment. The design of the proposed VCU incorporates several features which enhance performance, reliability and safety. John Zink also understands that, in addition to high-quality equipment, our customers value excellence in project execution and service. Purchasing a system from John Zink provides many advantages not limited to the following:

- Experienced design and project management staff dedicated to providing excellent customer service during the execution and installation phases of a project.
- In-house fabrication ability. Because John Zink owns its own 250,000 square foot manufacturing facility, we are able to assemble most systems in our own shop which allows us to better control quality and schedule.
- Large service organization. Our factory trained technicians provide both preventative maintenance and emergency call-out assistance 24/7.
- Spare parts inventory for quick turn arounds.
- Portable Emission Control Systems (PECS®) for temporary compliance needs.
- Installation assistance.

DESIGN BASIS

The John Zink® Vapor Combustion System is based on proprietary technology and sound engineering. Tank loading characteristics and other design data as furnished by Wyoming Refining/Douglas Scientific are summarized below:

Products Loaded

Diesel

Process Information	Maximum	Minimum
Flow Rate to Combustor	90 acfm	0 acfm
Hydrocarbon Concentration	13 Vol. % (with assist gas)	0.68 Vol %
Heat Release	2.36 MMBtu/hr	
Ambient Temperature	100 °F	0 °F

SCOPE

A John Zink Vapor Combustion Unit is comprised of the items described below. Equipment specifications are preliminary and subject to change based on final engineering:

One (1) VCU 4' OD x 20' OAL combustion stack which includes

- One (1) John Zink antiflashback burner
- One (1) John Zink KE-1 pilot
- One (1) 1 HP assist air blower
- One (1) 2' x 2' actuated air damper

One (1) waste gas pipe rack which includes

- 3" pipe
- One (1) 3" 150# wafer type butterfly block valve with electric actuator
- One (1) 3" Detonation arrestor
- Pilot / Assist gas piping
- One (1) NEMA 4 control panel

One (1) Ship loose vapor blower, TBD HP

One (1) Ship loose pressure transmitter to mounted on tank header

PERFORMANCE

Estimated Utility Requirements

Pilot Gas	21 SCFH Propane @ 4 PSIG or 54 SCFH of Natural Gas @ 7 PSIG per pilot
Assist Gas	As required to maintain 400 °F and meet stated emissions. Note: Most gasoline loading facilities can meet the stated emissions without supplemental fuel. It is not necessary to preheat the combustion stack before loading begins. Note: Quench air louvers will control stack temperature to 1400 °F.
Instrument Air	None
Power	120V/1 PH/60 HZ and 480V/3 PH/60 HZ

Guaranteed Hydrocarbon Emissions Level

10 Mg Hydrocarbon per Liter Product Loaded

NOx 4 Mg/Liter of Product Loaded

CO 10 Mg/Liter of Product Loaded

Electrical Classification

The unit is designed to be installed in a non-classified area and complies with the NEC with the following exception, Article 515 - Table 515.3, NFPA-70 of the National Electrical Code.

SCOPE OF SUPPLY

The John Zink Scope of Supply for this Vapor Combustion Unit will be as follows:

One (1) John Zink® Single Stage Packaged Hydrocarbon Vapor Combustion System. This system is designed to combust the hydrocarbon vapors from the incoming air/hydrocarbon vapor mixture in order to comply with guaranteed emission limits. The proposed unit includes a self-supported, vertical, carbon steel cylindrical shell lined with ceramic blanket refractory, anti-flashback burners, pilot, air assist blower, detonation arrestor with temperature switch and burner safety control valve.

PRICING AND DELIVERY

Budget Price for John Zink Vapor Combustion Unit (EX Works Point of Manufacturer)*:

Vapor Combustion Unit: US \$93,000

Estimated Readiness to Ship: 18-20 weeks ARO

* Each budget price includes design and fabrication but excludes freight and handling to job site, field installation, commissioning (start-up) services, applicable taxes, fees, permits, or any other charges.

* This is a budgetary proposal and is intended only as an estimate to facilitate your planning processes and does not constitute a commitment or offer to sell goods or services at the prices and terms referenced herein. Any firm offer or binding quotation will be the subject of a formal proposal at a future date.

Refer to the attached document for John Zink Standard Terms and Conditions of Sale.

OWNER REQUIREMENTS AND RESPONSIBILITIES

Note: This section is only intended to supply a general set of installation related comments. For a specific set of instructions please refer to the John Zink Operation and Maintenance Manual.

The owner is required to install the Vapor Combustion Unit in a NON-HAZARDOUS LOCATION.

1. Provide suitable skid and stack foundation, which will completely support the structural members.
2. Unload and set vapor combustor skid and stack on foundation.
3. Install items removed for shipping.
4. Furnish and connect vapor line from loading facilities.
5. The owner is responsible for the following field wiring and conduit from the control panel to:
 - Electrical items on the combustion stack.
 - The loading facilities.
6. Corrections of minor misfits by moderate amount of reaming, cutting, bending, welding, etc. are a part of fitup and installation. It is the intent of John Zink Company to minimize errors leading to misfits. If there are changes requiring more than moderate corrections, contact John Zink Company for instructions.
7. Provide 6" thick layer of 1" diameter aggregate to cover floor underneath combustion stack to protect concrete from cracking. Grout and seal bottom of combustion stack to minimize air leakage into stack.
8. Provide natural gas or propane to VCU for pilot gas and assist gas at specified flow rates and pressure of 25 psig.
9. Assure no low spot traps in vapor piping that would trap liquid.
10. Provide grounding for unit.
11. Provide any required winterization, including heat tracing and insulation.