July 1, 2015

US EPA Region-6, 6PD-R
Air Permit Section
1445 Ross Avenue Suite 1200
Dallas, TX 75202-2733

USPS Certified Mail
70143490000019067546

RE: Federal Title V Operating Program in Indian Country
Initial Title V Operating Permit Application - Rosario Asphalt Terminal

Dear Sir or Madam:

NuStar Energy (NuStar) operates the Rosario Terminal (Rosario) located on the Santo Domingo Pueblo in New Mexico. Rosario is currently operating and registered under NAICS 493190 and SIC 4226. This Initial Title V Operating Permit is being submitted per 40 CFR 71.5(a)(1)(i). The facility is comprised of two separate processes: an asphalt terminal and a crude oil transloading operation.

With the addition of crude oil transloading to the facility in 2014, Rosario became a Title V major source of volatile organic compounds (VOC) emissions. In March of 2015, NuStar submitted an application to EPA Region 6 for a synthetic minor permit for the Rosario Terminal. NuStar requested to limit the potential to emit (PTE) at the facility with the addition of a control device in this synthetic minor application. Upon issuance of the synthetic minor permit, Rosario will have federally enforceable limits below Title V major thresholds. Until the permit is issued, NuStar is obligated to submit an application for a Title V operating permit under 40 CFR Part 71.

The asphalt facility began construction in 2001 and began operation in 2002. The crude loading began construction and operation in 2014. The initial application forms for the Part 71 Federal Operating Permit Program are attached in this document.

Every effort has been made to prepare a factually complete and accurate application. If you have any questions regarding the contents of this application, please do not hesitate to contact me at (832) 536-3201 or Tina.Proctor@nustarenergy.com.

Sincerely,

Tina Proctor, CSP, CHMM
Gulf Coast Environmental Manager

Attachments as mentioned above.

PART 71 FEDERAL OPERATING PERMIT APPLICATION

NuStar Logistics, L.P. > Rosario Asphalt Terminal

Application for Federal Operating Permit Under 40 CFR Part 71

Prepared By:

TRINITY CONSULTANTS
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(505) 266-6611

June 2015

Project 153201.0066

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1. EXECUTIVE SUMMARY

NuStar Logistics, L. P. (NuStar) owns and operates the Rosario Terminal (Rosario). The facility is located in Sandoval County, New Mexico on the Santo Domingo Indian Reservation. The facility is comprised of two separate processes: an asphalt terminal and a crude oil transloading operation. Rosario currently operates under NAICS 493190 and SIC 4226.

With the addition of crude oil transloading to the facility in 2014, Rosario became a Title V major source of volatile organic compounds (VOC) emissions. In March of 2015, NuStar submitted an application to EPA Region 6 for a synthetic minor permit for the Rosario Terminal. NuStar requested to limit the potential to emit (PTE) at the facility with the addition of a control device in this synthetic minor application. Upon issuance of the synthetic minor permit, Rosario will have federally enforceable limits below Title V major thresholds. Until the permit is issued, NuStar is obligated to submit an application for a Title V operating permit under 40 CFR Part 71.

The asphalt facility began construction in 2001 and began operation in 2002. The crude loading began construction and operation in 2014. The initial application forms for the Part 71 Federal Operating Permit Program are attached in this document.

2. DESCRIPTION OF FACILITY

The Rosario Terminal is a bulk loading facility located within the Santa Domingo Indian Reservation. The facility has two separate operations: an asphalt plant and crude oil transloading facility. The facility is capable of operating continuously but typically operates on a ten hour per day, five day per week schedule. NuStar is permitting the facility as if operating continuously.

Asphalt is received by railcar and shipped out by truck. One (1) asphalt truck bay with one (1) transfer operation at a time occurs at this facility. Additionally, crude oil is transferred directly from tanker trucks to railcars, and this transloading operation is completely separate from the facility's asphalt operations. Up to two (2) transloaders may be used at a time at this facility.

Asphalt Process

The facility operates a polymer milling process to formulate various grades of polymer modified asphalt cement (PMA) with enhanced properties required by industry. The polymer mill is located in our warehouse and includes the following main physical equipment:

- An open top bin for receiving polymer pellets
- An open top bin for receiving sulfur pellets
- A wetting/mixing vessel
- Pumps, piping, auger, and various other ancillary components

The polymer is received at the terminal in super sacks and the sulfur is received in 50 pound bags. These dry solid pellets are stored in the same warehouse that the mill is located. The polymer sacks are held over a bin by forklift where the bottoms are cut to release the material into the bin. The polymer pellets are transferred from the bin by an enclosed auger to the 60 gallon wetting tank (WT-001) where the material is blended with liquid asphalt that is being pumped from a 10,000 bbl PMA storage tank (Unit 10-03 or 10-04). This mixture is fed into the polymer mill and then returns into a PMA storage tank (Unit 10-03 or 10-04) for blending. Once blended, the mixture is recirculated to the wetting tank where the sulfur pellets are added. This mixture is returned directly the PMA storage tank containing the blended polymer product for final curing.

The steam boiler is used to heat asphalt rail cars that are unloaded into facility storage tanks. This asphalt is received from the same supplier/refinery is not oxidized and will have a slight variation in the vapor pressure. The wet mixing vessel (wetting tank) for the PMA mill is 60 gallons with an electrically driven 1 hp mixer. All the tanks (Units 10-01, 10-02, 10-03, 10-04, 30-01, 30-02, 30-03, and 30-04) have electrically driven 40 hp mixers within the tanks. The tanks are insulated but not housed in a building. The tanks labeled 10 are 10,000 barrel tanks and the tanks labeled 30 are 30,000 barrel tanks. The asphalt tanker trucks take roughly 20-30 minutes to load asphalt from the tanks. The capacity of the tanker trucks are 145 bbls.

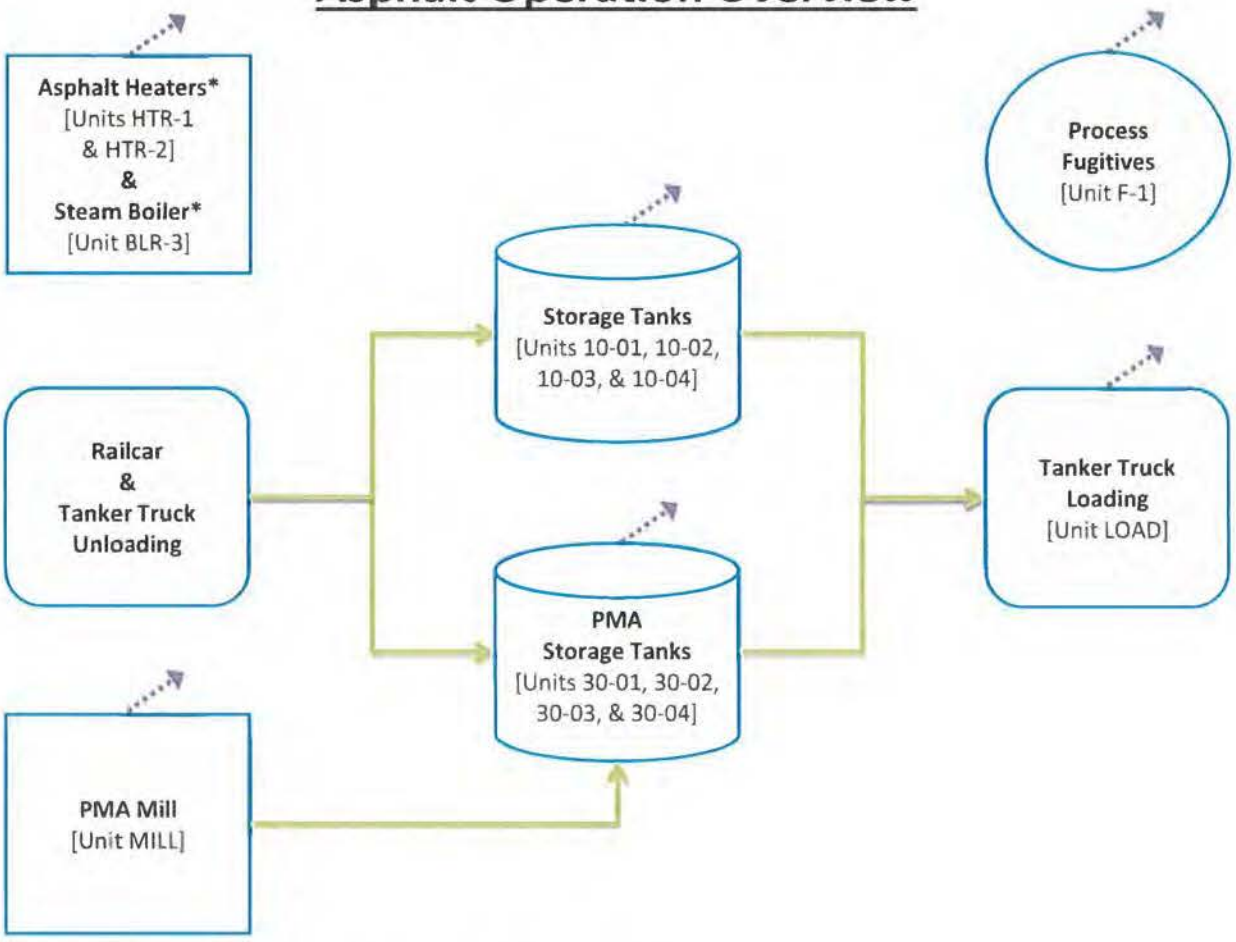
The Rosario terminal is not considered a Hot Mix Asphalt facility and does not mix aggregates with liquid asphalt cement. The facility supplies liquid asphalt cement to hot mix asphalt plants. The facility receives asphalt from refineries and is used as a terminal to store the liquid asphalt cement. The terminal distributes different performance grades of liquid asphalt, some of which are modified by adding polymer or acid.

Crude Loading Process

Tanker trucks haul in crude oil to the facility where a transloader will transfer the crude oil into a railcar. One vapor balancing hose is used for each crude oil transloader. Displaced vapors are returned from the railcar to the tanker truck. These vapors are displaced from the tank trucks offsite. Per AP-42 Section 5.2 guidelines, the facility is assuming a vapor collection efficiency of 70% and a vapor recovery efficiency of 95%. These assumed efficiencies result in an overall vapor control efficiency of 66.5% for the vapor balancing system. However, NuStar is claiming a 40% system overall vapor control efficiency for permitting purposes. The transloader operator ensures the vapor hoses are hooked up prior to transloading. Work practices are used to ensure vapor connections are tight and that vapor hoses are in good working order.

A plot flow diagram of the facility is included on the following page.

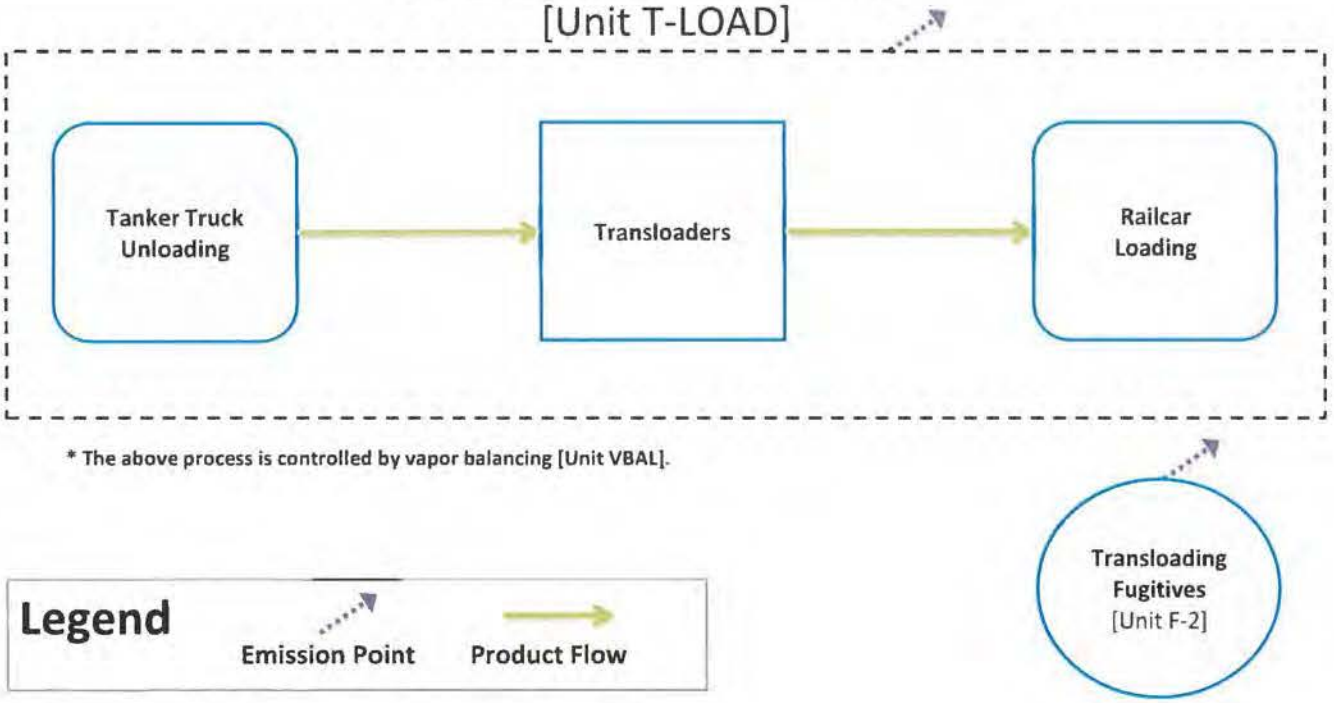
Asphalt Operation Overview



* The boiler and heaters provide heat throughout the above process.

Crude Oil Transloading*

[Unit T-LOAD]



* The above process is controlled by vapor balancing [Unit VBAL].

3. GENERAL INFORMATION AND SUMMARY

Form "GIS" – General Information and Summary is attached.

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

GENERAL INFORMATION AND SUMMARY (GIS)

A. Mailing Address and Contact Information

Facility name Rosario Terminal

Mailing address: 967 NM 16 Road

City Pena Blanca State NM ZIP 87041

Contact person: Ronnie Fernandez Title Terminal Manager

Telephone (505) 603 - 4227 Ext. _____

Facsimile (210) 918 - 5509

B. Facility Location

Temporary source? ___Yes X No Plant site location 967 NM 16 Road

City Pena Blanca State NM County Sandoval EPA Region 6

Is the facility located within:

Indian lands? X YES ___ NO OCS waters? ___YES X No

Non-attainment area? ___ YES X No If yes, for what air pollutants? N/A

Within 50 miles of affected State? X YES __ NO If yes, What State(s)? The facility is located on the Santa Domingo Reservation and is approximately 0.15 miles from the State of New Mexico.

C. Owner

Name NuStar Logistics, L.P. Street/P.O. Box 400 Grove Road

City West Depford State NJ ZIP 08066

Telephone (856) 579 - 5063 Ext_____

D. Operator

Name NuStar Logistics, L.P. Street/P.O. Box 400 Grove Road

City West Depford State NJ ZIP 08066

Telephone (856) 579 - 5063 Ext_____

E. Application Type

Mark only one permit application type and answer the supplementary question appropriate for the type marked.

_X_ Initial Permit ___ Renewal ___ Significant Mod ___ Minor Permit Mod(MPM)

___ Group Processing, MPM ___ Administrative Amendment

For initial permits, when did operations commence? 07 / 2014*

For permit renewal, what is the expiration date of current permit? ____N/A____

*Please note the facility began operation in 2002 but started the crude loading operation in June of 2014. It is the crude loading operation that brought the facility into a Title V source.

F. Applicable Requirement Summary

Mark all types of applicable requirements that apply.

___ SIP _X_ FIP/TIP ___ PSD ___Non-attainment NSR

___ Minor source NSR ___ Section 111 ___ Phase I acid rain ___Phase II acid rain

___ Stratospheric ozone ___ OCS regulations ___ NESHAP ___ Sec. 112(d) MACT

___ Sec. 112(g) MACT ___ Early reduction of HAP ___ Sec 112(j) MACT ___ RMP [Sec.112(r)]

___ Tank Vessel requirements, sec. 183(f)) ___ Section 129 Standards/Requirement

___ Consumer / comm.. products, ' 183(e) ___ NAAQS, increments or visibility (temp. sources)

Has a risk management plan been registered? ___YES ___NO Regulatory agency _____

Phase II acid rain application submitted? ___YES ___NO If yes, Permitting authority _____

G. Source-Wide PTE Restrictions and Generic Applicable Requirements

Cite and describe any emissions-limiting requirements and/or facility-wide "generic" applicable requirements.

Please note: The facility has submitted a synthetic minor source permit to limit the facility-wide VOC emissions PTE. The synthetic minor permit will provide the facility with a federally enforceable limit on the VOC emissions. The facility will not be a Title V source once the synthetic minor permit is issued.

H. Process Description

List processes, products, and SIC codes for the facility.

Process	Products	SIC
Liquid asphalt plant	Asphalt	4226
Crude oil transloading	Crude Oil	4226

I. Emission Unit Identification

Assign an emissions unit ID and describe each emissions unit at the facility. Control equipment and/or alternative operating scenarios associated with emissions units should by listed on a separate line. Applicants may exclude from this list any insignificant emissions units or activities.

Emissions Unit ID	Description of Unit
10-01	10,000 Barrel fixed cone roof insulated asphalt storage tank
10-02	10,000 Barrel fixed cone roof insulated asphalt storage tank
10-03	10,000 Barrel fixed cone roof insulated asphalt storage tank
10-04	10,000 Barrel fixed cone roof insulated asphalt storage tank
30-01	30,000 Barrel fixed cone roof insulated asphalt storage tank
30-02	30,000 Barrel fixed cone roof insulated asphalt storage tank
30-03	30,000 Barrel fixed cone roof insulated asphalt storage tank
30-04	30,000 Barrel fixed cone roof insulated asphalt storage tank
HTR-1	25.2 MMBtu/hr asphalt heater
HTR-2	18.7 MMBtu/hr asphalt heater
BLR-3	17.5 MMBtu/hr steam boiler
LOAD	Asphalt loading - 3,504,000 barrels/year
F-1	Asphalt process fugitives
MILL	PMA mill
T-LOAD	Two crude oil transloaders – 1,755,285 barrels/year
F-2	Crude oil transloading fugitives
VBAL	Two vapor balancing hoses leading from crude oil railcars to tanker trucks

J. Facility Emissions Summary

Enter potential to emit (PTE) for the facility as a whole for each air pollutant listed below. Enter the name of the single HAP emitted in the greatest amount and its PTE. For all pollutants stipulations to major source status may be indicated by entering "major" in the space for PTE. Indicate the total actual emissions for fee purposes for the facility in the space provided. Applications for permit modifications need not include actual emissions information.

NOx 26.36 tons/yr VOC 130.07 tons/yr SO2 0.17 tons/yr

PM-10 2.04 tons/yr CO 22.15 tons/yr Lead - tons/yr

Total HAP 8.8 tons/yr

Single HAP emitted in the greatest amount n-Hexane PTE 3.1 tons/yr

Total of regulated pollutants (for fee calculation), Sec. F, line 5 of form FEE 4.5 tons/yr

K. Existing Federally-Enforceable Permits

Permit number(s) _____ Permit type _____ Permitting authority _____

Permit number(s) _____ Permit type _____ Permitting authority _____

L. Emission Unit(s) Covered by General Permits

Emission unit(s) subject to general permit _____

Check one: ___ Application made ___ Coverage granted

General permit identifier _____ Expiration Date ___/___/___

M. Cross-referenced Information

Does this application cross-reference information? ___ YES X NO (If yes, see instructions)

INSTRUCTIONS FOLLOW

4. EMISSION UNIT DESCRIPTION

The following emission unit description forms are attached:

Form "EUD1" – Emission Unit Description for Combustion Sources is attached for the following units:

- HTR-1 – 25.2 MMBtu/hr thermal fluid asphalt heater
- HTR-2 – 18.7 MMBtu/hr thermal fluid asphalt heater
- BLR-3 – 17.5 MMBtu/hr steam boiler

There is a fuel meter from the natural gas supplier. There should not be a fuel usage limit since all combustion unit emissions are based on the PTE of 8,760 hours of operation. The maximum fuel usage for the facility is 527.31 MMscf/yr. The facility will keep records of operating hours for each of the combustion sources.

Form "EUD2" – Emission Unit Description for VOC emitting Sources is attached for the following units:

- 10-01, 10-02, 10-03, 10-04 – 10,000 barrel insulated fixed cone roof storage tanks
- 30-01, 30-02, 30-03, 30-04 – 30,000 barrel insulated fixed cone roof storage tanks

Form "EUD3" – Emission Unit Description for Process Sources is attached for the following units:

- LOAD – Asphalt loading (splash loading, dedicated normal service)
- F-1 – Process Fugitives
- MILL – PMA mill
- T-LOAD – Two crude oil transloaders (submerged loading, vapor balance) controlled by two vapor balancing hoses. A conservative overall vapor control efficiency of 40% is being claimed for permitting purposes.
- F-2 – Transloading Fugitives

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

EMISSION UNIT DESCRIPTION FOR PROCESS SOURCES (EUD-3)

A. General Information

Emissions unit ID LOAD Description Tanker truck asphalt loading

SIC Code (4-digit) 4226 SCC Code 40600129

B. Emissions Unit Description

Primary use or equipment type Asphalt loading into tanker trucks

Manufacturer N/A Model No. N/A

Serial No. N/A Installation date 2001

Raw materials Asphalt

Finished products Asphalt

Temporary source: _X_ No ___ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	400 bbl/hr	3,504,000 bbl/yr
Maximum rate	400 bbl/hr	3,504,000 bbl/yr

D. Associated Air Pollution Control Equipment

Not applicable – there is no air pollution control equipment associated with the asphalt loading process.

Emissions unit ID _____ Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date ____/____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled _____ Efficiency estimation method _____

E. Ambient Impact Assessment

Not applicable – source is not temporary and ambient impact assessment is not required.

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

A. General Information

Emissions unit ID F-1 Description Process Fugitives

SIC Code (4-digit) 4226 SCC Code 30630007

B. Emissions Unit Description

Primary use or equipment type Process fugitive emissions from heavy liquid service and PMA mill

Manufacturer N/A Model No. N/A

Serial No. N/A Installation date 2001

Raw materials N/A

Finished products N/A

Temporary source: X No ___Yes

C. Activity or Production Rates

Not applicable – process fugitive emissions are based on component counts and emission factors from the EPA Petroleum Terminal Marketing Factors. Activity or production rates do not apply.

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate		
Maximum rate		

D. Associated Air Pollution Control Equipment

Not applicable – there is no air pollution control equipment associated with facility process fugitives.

Emissions unit ID _____ Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date _____/_____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled _____ Efficiency estimation method _____

E. Ambient Impact Assessment

Not applicable – source is not temporary and ambient impact assessment is not required.

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

A. General Information

Emissions unit ID MILL Description Polymer milling process

SIC Code (4-digit) 4226 SCC Code 2501000000

B. Emissions Unit Description

Primary use or equipment type To formulate various grades of polymer modified asphalt cement (PMA)

Manufacturer N/A Model No. N/A

Serial No. N/A Installation date 2001

Raw materials Solid polymer (asphalt additive)

Finished products Polymer modified asphalt cement (PMA)

Temporary source: _X_ No ___ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	2,300 lb/hr	20,092,800 lb/yr
Maximum rate	2,300 lb/hr	20,092,800 lb/yr

D. Associated Air Pollution Control Equipment

Not applicable – there is no air pollution control equipment associated with the polymer milling process.

Emissions unit ID _____ Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date ____/____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled _____ Efficiency estimation method _____

E. Ambient Impact Assessment

Not applicable – source is not temporary and ambient impact assessment is not required.

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

A. General Information

Emissions unit ID T-LOAD Description Crude oil transloading

SIC Code (4-digit) 4226 SCC Code 40600132

B. Emissions Unit Description

Primary use or equipment type Loading of crude oil

Manufacturer N/A Model No. N/A

Serial No. N/A Installation date June 2014

Raw materials Crude oil

Finished products Crude oil

Temporary source: _X_ No ___ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	This operation began in late 2014. Actual activity rates are not available.	
Maximum rate	An hourly throughput is not applicable. Average daily throughput is 4,809 bbl/yr	1,755,285 bbl/yr

D. Associated Air Pollution Control Equipment

Emissions unit ID VBAL

Device Type Two vapor balancing hoses from crude oil railcars to tanker trucks

Manufacturer N/A Model No N/A

Serial No. N/A Installation date June 2014

Control efficiency (%) 40% Capture efficiency (%) 70%

Air pollutant(s) controlled VOC Efficiency estimation method Conservative requested efficiency based on calculated efficiency from AP-42 Section 5.2 guidelines.

E. Ambient Impact Assessment

Not applicable – source is not temporary and ambient impact assessment is not required.

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

A. General Information

Emissions unit ID F-2 Description Transloading Fugitives

SIC Code (4-digit) 4226 SCC Code 30600805

B. Emissions Unit Description

Primary use or equipment type Fugitive emissions from transloading of crude oil

Manufacturer N/A Model No. N/A

Serial No. N/A Installation date June 2014

Raw materials N/A

Finished products N/A

Temporary source: _X_No ___Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	N/A – Fugitive Emissions Leaks on Valves, Flanges, etc	
Maximum rate		

D. Associated Air Pollution Control Equipment

Not applicable – there is no air pollution control equipment associated with facility process fugitives.

Emissions unit ID _____ Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date _____/_____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled _____ Efficiency estimation method _____

E. Ambient Impact Assessment

Not applicable – source is not temporary and ambient impact assessment is not required.

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

EMISSIONS UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID 10-01, 10-02, 10-03, and 10-04

Description 10,000 barrel fixed cone roof insulated asphalt storage tanks

SIC Code (4-digit): 4226 SCC Code: 40301023

B. Emissions Unit Description

Equipment type 10,000 barrel fixed cone roof insulated storage tanks

Temporary source: ___Yes _X_No

Manufacturer: N/A Model No.: N/A

Serial No.: N/A Installation date: 2001

Articles being coated or degreased: N/A

Application method: N/A

Overspray (surface coating) (%): N/A Drying method: N/A

No. of dryers: N/A Tank capacity (gal): 420,000 gal each

C. Associated Air Pollution Control Equipment

Not applicable – there are no associated air pollution control equipment used with these storage tanks.

Emissions unit ID _____ Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date ____/____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled_____ Efficiency estimation method _____

D. Ambient Impact Assessment

Not applicable – the tanks are not temporary sources and do not require ambient impact assessment.

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____ Velocity (ft/sec) _____._____

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	CAS No.	Substance Type	Actual Usage (gal/yr)	Max Usage (gal/day)	Max Usage (gal/year)	VOC Content (lb/gal)
Asphalt	8052-42-4	Liquid/ Solid	-	403200	147,168,000	8.68

A. General Information

Emissions unit ID 30-01, 30-02, 30-03, and 30-04

Description 30,000 barrel fixed cone roof insulated asphalt storage tanks

SIC Code (4-digit): 4226 SCC Code: 40301023

B. Emissions Unit Description

Equipment type 30,000 barrel fixed cone roof insulated storage tanks

Temporary source: ___Yes _X_No

Manufacturer: N/A Model No.: N/A

Serial No.: N/A Installation date: 2001

Articles being coated or degreased: N/A

Application method: N/A

Overspray (surface coating) (%): N/A Drying method: N/A

No. of dryers: N/A Tank capacity (gal): 1,260,000 gal each

C. Associated Air Pollution Control Equipment

Not applicable – there are no associated air pollution control equipment used with these storage tanks.

Emissions unit ID _____ Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date ____/____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled_____ Efficiency estimation method _____

D. Ambient Impact Assessment

Not applicable – the tanks are not temporary sources and do not require ambient impact assessment.

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____ Velocity (ft/sec) _____._____

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	CAS No.	Substance Type	Actual Usage (gal/yr)	Max Usage (gal/day)	Max Usage (gal/year)	VOC Content (lb/gal)
Asphalt	8052-42-4	Liquid/ Solid	-	403200	147,168,000	8.68

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

EMISSION UNIT DESCRIPTION FOR FUEL COMBUSTION SOURCES (EUD-1)

A. General Information

Emissions unit ID HTR-1 Description 25.2 MMBtu/hr thermal fluid heater

SIC Code (4-digit) 4226 SCC Code 10200602

B. Emissions Unit Description

Primary use Provide heat throughout the asphalt operation Temporary Source ___Yes _X_No

Manufacturer Power Flame Burner Model No. HPG-E15V

Serial Number 08992073P Installation Date 2001

Boiler Type: ___ Industrial boiler ___ Process burner ___ Electric utility boiler

Other (describe) Process Heater

Boiler horsepower rating: N/A Boiler steam flow (lb/hr): N/A

Type of Fuel-Burning Equipment (coal burning only): N/A

___ Hand fired ___Spreader stoker ___Underfeed stoker ___Overfeed stoker

___ Traveling grate ___Shaking grate ___Pulverized, wet bed ___ Pulverized, dry bed

Actual Heat Input 25.2 MM BTU/hr Max. Design Heat Input 25.2 MM BTU/hr

C. Fuel Data

Primary fuel type(s) Natural Gas Standby fuel type(s) N/A

Describe each fuel you expected to use during the term of the permit.

Fuel Type	Max. Sulfur Content (%)	Max. Ash Content (%)	BTU Value (cf, gal., or lb.)
Natural Gas	2000 grains S/10^6 scf	-	1,020 Btu/scf

D. Fuel Usage Rates

Fuel Type	Annual Actual Usage	Maximum Usage	
		Hourly	Annual
Natural Gas	216.4 MMscf/yr	24.7 Mscf/hr	216.4 MMscf/yr

E. Associated Air Pollution Control Equipment

Not applicable – this unit does not have air pollution control equipment.

Emissions unit ID_____ Device type_____

Air pollutant(s) Controlled_____ Manufacturer_____

Model No._____ Serial No._____

Installation date_____/_____/_____ Control efficiency (%) _____

Efficiency estimation method_____

F. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Not applicable – not a temporary source and ambient impact assessment is not required.

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp(°F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

A. General Information

Emissions unit ID HTR-2 Description 18.7 MMBtu/hr thermal fluid heater

SIC Code (4-digit) 4226 SCC Code 10200602

B. Emissions Unit Description

Primary use Provide heat throughout the asphalt operation Temporary Source ___Yes _X_No

Manufacturer Power Flame Burner Model No. C8-G-30

Serial Number 099991301 Installation Date 2001

Boiler Type: ___ Industrial boiler ___ Process burner ___ Electric utility boiler

Other (describe) Process Heater _____

Boiler horsepower rating: N/A Boiler steam flow (lb/hr) : N/A

Type of Fuel-Burning Equipment (coal burning only): N/A

___ Hand fired ___Spreader stoker ___Underfeed stoker ___Overfeed stoker

___ Traveling grate ___Shaking grate ___Pulverized, wet bed ___ Pulverized, dry bed

Actual Heat Input 18.7 MM BTU/hr Max. Design Heat Input 18.7 MM BTU/hr

C. Fuel Data

Primary fuel type(s) Natural Gas Standby fuel type(s) N/A

Describe each fuel you expected to use during the term of the permit.

Fuel Type	Max. Sulfur Content (%)	Max. Ash Content (%)	BTU Value (cf, gal., or lb.)
Natural Gas	2,000 grains S/10^6 scf	-	1,020 Btu/scf

D. Fuel Usage Rates

Fuel Type	Annual Actual Usage	Maximum Usage	
		Hourly	Annual
Natural Gas	160.6 MMscf/yr	18.3 Mscf/hr	160.6 MMscf/yr

E. Associated Air Pollution Control Equipment

Not applicable – this unit does not have air pollution control equipment.

Emissions unit ID_____ Device type_____

Air pollutant(s) Controlled_____ Manufacturer_____

Model No._____ Serial No._____

Installation date____/____/_____ Control efficiency (%) _____

Efficiency estimation method_____

F. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Not applicable – not a temporary source and ambient impact assessment is not required.

Stack height (ft) _____.____ Inside stack diameter (ft) _____.____

Stack temp(°F) _____.____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____.____ Velocity (ft/sec) _____.____

A. General Information

Emissions unit ID BLR-3 Description 17.5 MMBtu/hr steam boiler

SIC Code (4-digit) 4226 SCC Code 10200602

B. Emissions Unit Description

Primary use Provide heat throughout the asphalt operation Temporary Source ___Yes _X_No

Manufacturer Industrial Combustion Model No. DG-175P

Serial Number 39469-1 Installation Date: 2001

Boiler Type: ___ Industrial boiler _X_ Process burner ___ Electric utility boiler

Other (describe)

Boiler horsepower rating 400 horsepower Boiler steam flow (lb/hr)_____

Type of Fuel-Burning Equipment (coal burning only): N/A

___ Hand fired ___Spreader stoker ___Underfeed stoker ___Overfeed stoker

___ Traveling grate ___Shaking grate ___Pulverized, wet bed ___ Pulverized, dry bed

Actual Heat Input _17.5_ MM BTU/hr Max. Design Heat Input _17.5_ MM BTU/hr

C. Fuel Data

Primary fuel type(s) Natural Gas Standby fuel type(s) N/A

Describe each fuel you expected to use during the term of the permit.

Fuel Type	Max. Sulfur Content (%)	Max. Ash Content (%)	BTU Value (cf, gal., or lb.)
Natural Gas	2,000 grains S/10^6 scf	-	1,020 Btu/scf

D. Fuel Usage Rates

Fuel Type	Annual Actual Usage	Maximum Usage	
		Hourly	Annual
Natural Gas	150.3 MMscf/yr	17.2 Mscf/hr	150.3 MMscf/yr

E. Associated Air Pollution Control Equipment

Not applicable – this unit does not have air pollution control equipment.

Emissions unit ID_____ Device type_____

Air pollutant(s) Controlled_____ Manufacturer_____

Model No._____ Serial No._____

Installation date_____/_____/_____ Control efficiency (%) _____

Efficiency estimation method_____

F. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Not applicable – not a temporary source and ambient impact assessment is not required.

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp(°F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

5. INSIGNIFICANT ACTIVITIES

This facility does not have any insignificant activities.

6. EMISSION CALCULATIONS

Form "EMISS" - Emission Calculations is attached in this section. Actual emissions are from 2012 facility data.

Asphalt Terminal
The asphalt loading calculations are based on AP-42 emissions facility from Section 5.2. The asphalt loading saturation factor from AP-42 Table 5.2-1 used is for splash loading dedicated to normal service. The throughput is based on 3,504,000 barrels per year with a maximum pump rate of 400 barrels per hour.

The PMA mill hourly particulate emissions are based on a max processing rate of 2,300 pounds per hour and the annual particulate calculations are based on 8,760 hours of operation. The asphalt tanks are based on AP-42 vertical fixed roof tank equations.

Crude Oil Transloading

The new crude oil transloading operation is completely separate from the facility's existing asphalt railcar offloading, storage, and truck loading operations. The crude oil transloading operation's potential-to-emit calculations are based on a maximum annual throughput of 1,755,285 barrels of crude oil. This maximum throughput limit is determined by two factors: 1) the maximum number full railcars that can fit onto the truck-accessible rail spur for transloading, and 2) the maximum frequency of rail switches provided to the facility by the railroad company.

1) The facility's transloading rail spur can only accommodate 17 full railcars before a rail switch is necessary to provide empty railcars. Each railcar has a maximum capacity of 660 barrels, so the rail spur's total loading capacity is 11,220 barrels before a rail switch is required.

2) BNSF is the only railroad company that services this facility. BNSF will provide a maximum of three rail switches per week to the facility. This is a limit that is imposed upon the facility by the railroad company, and the facility does not have the ability to raise this limit.

The maximum annual transloading throughput is computed using the following two equations:
(11,220 barrels/rail switch) * (3 rail switches/week) / (7 days/week) = 4,809 barrels/day
(4,809 barrels/day) * (365 days/year) = 1,755,285 barrels/year

One vapor balancing hose is used for each crude oil transloader. Displaced vapors are returned from the railcar to the tanker truck. These vapors are displaced from the tank trucks offsite. Per AP-42 Section 5.2 guidelines, the facility is assuming a vapor collection efficiency of 70% and a vapor recovery efficiency of 95%. These assumed efficiencies result in an overall vapor control efficiency of 66.5% for the vapor balancing system. However, NuStar is claiming a 40% system overall vapor control efficiency for permitting purposes.

Fugitive Emissions
The fugitive emissions are based on EPA Petroleum Terminal Marketing factors.

Heater and Boiler Emissions
Heater and boiler emissions are based on the maximum boiler plate heat input and AP-42 emissions factors (Table 1.4-1 and 1.4-2).

Federal Operating Permit Program (40 CFR Part 71)

EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form **GIS**. If form **FEE** does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID 10-01

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00023	0.002	0.01	N/A

A. Emissions Unit ID 10-02

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00023	0.002	0.01	N/A

A. Emissions Unit ID 10-03

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00023	0.002	0.01	N/A

A. Emissions Unit ID 10-04

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00029	0.002	0.01	N/A

A. Emissions Unit ID 30-01

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00086	0.007	0.03	N/A

A. Emissions Unit ID 30-02

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00074	0.007	0.03	N/A

A. Emissions Unit ID 30-03

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00073	0.007	0.03	N/A

A. Emissions Unit ID 30-04

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.00097	0.007	0.03	N/A

A. Emissions Unit ID HTR-1

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
NO_x	0.51	2.47	10.82	10102–44–0 (NO2), 10024–97–2 (NO)
CO	0.43	2.08	9.09	630-08-0
VOC	0.03	0.14	0.60	N/A
SO_2	0.003	0.016	0.07	7449-09-05
PM	0.04	0.19	0.82	N/A
CO_2	-	2,964.7	12,985.2	124-38-9
CH_4	-	0.057	0.25	74-82-8
N_2O	-	0.055	0.24	10024-97-2

A. Emissions Unit ID HTR-2

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
NO_X	0.51	1.83	8.03	10102–44–0 (NO_2), 10024–97–2 (NO)
CO	0.43	1.54	6.75	630-08-0
VOC	0.03	0.10	0.44	N/A
SO_2	0.003	0.011	0.05	7449-09-05
PM	0.04	0.14	0.61	N/A
CO_2	-	2,200.0	9,636.0	124-38-9
CH_4	-	0.043	0.19	74-82-8
N_2O	-	0.041	0.18	10024-97-2

A. Emissions Unit ID BLR-3

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
NO_X	0.55	1.71	7.51	10102–44–0 (NO_2), 10024–97–2 (NO)
CO	0.24	1.44	6.31	630-08-0
VOC	0.04	0.094	0.41	N/A
SO_2	0.004	0.011	0.05	7449-09-05
PM	0.04	0.13	0.57	N/A
CO_2	-	2,071.1	9,071.4	124-38-9
CH_4	-	0.039	0.17	74-82-8
N_2O	-	0.039	0.17	10024-97-2

A. Emissions Unit ID LOAD

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.07	0.02	0.07	N/A
H_2S	-	0.000003	0.000013	7783-06-4

A. Emissions Unit ID F-1

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.02	0.057	0.25	N/A
H2S	0.00	0.00	0.00	7783-06-4

A. Emissions Unit ID MILL

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
PM	0.04	0.0091	0.04	N/A

A. Emissions Unit ID T-LOAD

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	1.4	29.3	128.13	N/A
HAPs	0.10	2.0	8.8	N/A

A. Emissions Unit ID F-2

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	0.0046	0.001	0.0046	N/A
HAP	0.0023	0.0005	0.0023	N/A

NUSTAR LOGISTICS, L.P.
ROSARIO ASPHALT TERMINAL
EMISSION SUMMARY - UNCONTROLLED EMISSIONS

									Greenhouse Gases			
EPN	Source	VOC (LBS/YR)	VOC TPY	H_2S TPY	NOx TPY	CO TPY	PM TPY[1]	SO2 TPY	CO_2 TPY	CH_4 TPY	N_2O TPY	
10-01	Storage Tank	26.50	0.01	0.00								
10-02	Storage Tank	26.50	0.01	0.00								
10-03	Storage Tank	26.50	0.01	0.00								
10-04	Storage Tank	26.50	0.01	0.00								
30-01	Storage Tank	59.01	0.03	0.00								
30-02	Storage Tank	59.01	0.03	0.00								
30-03	Storage Tank	59.01	0.03	0.00								
30-04	Storage Tank	59.01	0.03	0.00								
HTR-1	Asphalt Heater	1190.31	0.60	0.00	10.82	9.09	0.82	0.07	12985.20	0.25	0.24	
HTR-2	Asphalt Heater	883.30	0.44	0.00	8.03	6.75	0.61	0.05	9636.00	0.19	0.18	
BLR-3	Steam Boiler	826.60	0.41	0.00	7.51	6.31	0.57	0.05	9017.40	0.17	0.17	
LOAD	Asphalt Loading	132.94	0.07	0.00								
F - 1	Process Fugitives	509.17	0.25	0.00	0.00	0.00	0.15	0.00				
MILL	PMA Mill						0.04					
T-LOAD	Crude Oil Transloading	256266.20	128.13	0.00	0.00	0.00	0.00	0.00				
F - 2	Transloading Fugitives	27.35	0.01	0.00	0.00	0.00	0.00	0.00				
Totals			**130.09**	**0.00**	**26.36**	**22.15**	**2.19**	**0.16**	**31638.60**	**0.61**	**0.58**	
								GWP[2]	1	25	298	**Total**
								CO_{2e} TPY	**31638.60**	**15.18**	**172.84**	**31826.62**

POTENTIAL TO EMIT ASSUMPTIONS

Crude oil transloading emissions potential based on a maximum of 11,220 bbl/week * 52 weeks/year

[1] $PM_{2.5}$ and PM_{10} air emission rates estimated to be equal to or less than the total particulate matter (PM) emission rates listed in this table.

[2]GWP refers to "Global Warming Potential" per EPA's GHG permitting guidance. The GHG emissions resulting from the facility's operations are restricted to CO_2, CH_4, and N_2O.

NUSTAR LOGISTICS, L.P.
ROSARIO ASPHALT TERMINAL
HEATER EMISSIONS (ESTIMATED) - UNCONTROLLED EMISSIONS

[UNIT HTR-1] (Natural Gas Fired Thermal Fluid Heater)

Burner Heat Input (MMBtu/hr):	25.2	Hrs/yr:	8760

	AP-42 Factor	Units	% Load	Fuel Btu/scf	Fuel MMscf/yr	Emission Rates lb/yr	Emission Rates tpy	Global Warming Potential	CO_{2e} tpy
NOx	100	lb/MM SCF	100	1020	216.42	21,642.00	10.82	N/A	N/A
CO	84	lb/MM SCF	100	1020	216.42	18,179.28	9.09	N/A	N/A
VOC	5.5	lb/MM SCF	100	1020	216.42	1,190.31	0.60	N/A	N/A
PM	7.6	lb/MM SCF	100	1020	216.42	1,644.79	0.82	N/A	N/A
SO_2	0.6	lb/MM SCF	100	1020	216.42	129.85	0.07	N/A	N/A
CO_2	120000	lb/MM SCF	100	1020	216.42	25,970,400.00	12985.20	1	12985.20
CH_4	2.3	lb/MM SCF	100	1020	216.42	497.77	0.25	25	6.23
N_2O	2.2	lb/MM SCF	100	1020	216.42	476.12	0.24	298	70.92
Total									**13062.35**

Emission estimates from AP-42 Table 1.4-1 & 2, 7/98

[UNIT HTR-2] (Natural Gas Fired Thermal Fluid Heater)

Burner Heat Input (MMBtu/hr):	18.7	Hrs/yr:	8760

	AP-42 Factor	Units	% Load	Fuel Btu/scf	Fuel MMscf/yr	Emission Rates lb/yr	Emission Rates tpy	Global Warming Potential	CO_{2e} tpy
NOx	100	lb/MM SCF	100	1020	160.60	16,060.00	8.03	N/A	N/A
CO	84	lb/MM SCF	100	1020	160.60	13,490.40	6.75	N/A	N/A
VOC	5.5	lb/MM SCF	100	1020	160.60	883.30	0.44	N/A	N/A
PM	7.6	lb/MM SCF	100	1020	160.60	1,220.56	0.61	N/A	N/A
SO_2	0.6	lb/MM SCF	100	1020	160.60	96.36	0.05	N/A	N/A
CO_2	120000	lb/MM SCF	100	1020	160.60	19,272,000.00	9636.00	1	9636.00
CH_4	2.3	lb/MM SCF	100	1020	160.60	369.38	0.19	25	4.63
N_2O	2.2	lb/MM SCF	100	1020	160.60	353.32	0.18	298	52.75
Total									**9693.37**

Emission estimates from AP-42 Table 1.4-1 & 2, 7/98

[UNIT BLR-3] (Natural Gas Fired Steam Boiler)

Burner Heat Input (MMBtu/hr):	17.5	Hrs/yr:	8760

	AP-42 Factor	Units	% Load	Fuel Btu/scf	Fuel MMscf/yr	Emission Rates lb/yr	Emission Rates tpy	Global Warming Potential	CO_{2e} tpy
NOx	100	lb/MM SCF	100	1020	150.29	15,029.00	7.51	N/A	N/A
CO	84	lb/MM SCF	100	1020	150.29	12,624.36	6.31	N/A	N/A
VOC	5.5	lb/MM SCF	100	1020	150.29	826.60	0.41	N/A	N/A
PM	7.6	lb/MM SCF	100	1020	150.29	1,142.20	0.57	N/A	N/A
SO_2	0.6	lb/MM SCF	100	1020	150.29	90.17	0.05	N/A	N/A
CO_2	120000	lb/MM SCF	100	1020	150.29	18,034,800.00	9017.40	1	9017.40
CH_4	2.3	lb/MM SCF	100	1020	150.29	345.67	0.17	25	4.33
N_2O	2.2	lb/MM SCF	100	1020	150.29	330.64	0.17	298	49.17
Total									**9070.90**

Emission estimates from AP-42 Table 1.4-1 & 2, 7/98

NUSTAR LOGISTICS, L.P.
ROSARIO ASPHALT TERMINAL
LOADING EMISSIONS [UNIT LOAD] - UNCONTROLLED EMISSIONS

Rack loading loss calculations - Maximum Throughput

Product	Through-put (BBL)	MW	S	P	Temp. Deg. R	LI=lb/MGal	Load. Loss (tons/yr)	Avg. VOC Emissions (tons/yr)	H_2S Vapor Fraction[1]	Avg. H_2S Emissions (tons/yr)
Asphalt	3,504,000	190	1.45	0.0002	760	0.0009	0.07	0.07	0.00020	0.000013

Maximum throughput based on a maximum pump rate of 400 bbl/hr x 8760 hrs/yr (24 hrs/day*7 days/week * 52 weeks/yr)

Product	Max Load Rate (M Gal/hr)	MW	S	P	Temp. Deg. R	LI=lb/MGal	Loading Loss (lb/hr)	Max. VOC Emissions (lb/hr)	H_2S Vapor Fraction[1]	Avg. H_2S Emissions (lb/hr)
Asphalt	16.8	190	1.45	0.0002	760	0.0009	0.02	0.02	0.00020	0.00000304

Maximum loading rate based on a maximum pump rate of 400 bbl/hr x 0.42 MGal/bbl

AP42

Loading Loss Equation: LI=12.46 SPM/T

LI=lb/MGal

S= Saturation Factor from AP-42 Section 5.2 (1/95) Table 5.2-1

P=Vapor Pressure of Product (psia)

MW=Molecular Weight of Product (lb/lb-mol)

T= Average Temperature of Product (degrees Rankin)

Notes:

[1] Hydrogen sulfide emissions were estimated based on a conservative concentration of H2S in asphalt storage tank vapor of 500 ppmv per Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading , Environmental Progress (Vol.18, No.4), David C. Trumbore, Asphalt Technology Laboratory. Owens Corning, Summit, IL 60501, Page 258. The volume or molar concentration of 500 ppmv is converted to ppmw by the molecular weight of H2S and molecular weight of the asphalt vapor or (34.08 lb H2S/lb-mol H2S)(500 lb-mol H2S/MM lb-mol H2S)/(85 lb vapor/lb-mol vapor) = 200 ppmw or a mass fraction of H2S in vapor of 200 lb/1,000,000 lb = 0.0002. This factor is then multipled against the asphalt vapor mass emissions to get H2S mass emissions.

NUSTAR LOGISTICS, L.P.
ROSARIO ASPHALT TERMINAL
PMA MILL EMISSIONS [UNIT MILL] - UNCONTROLLED EMISSIONS

PMA Mill emissions calculations - Maximum Throughput

Product	Annual Hours of Operation	Max Hourly PM Emissions (lbs/hr)	Max Annual PM Emissions (tons/yr)	Max Hourly PM_{10} Emissions (lbs/hr)	Max Annual PM_{10} Emissions (tons/yr)	Max Hourly $PM_{2.5}$ Emissions (lbs/hr)	Max Annual $PM_{2.5}$ Emissions (tons/yr)
Milled Sulfur-Based Polymer	8,760	0.01	0.0438	0.01	0.0438	0.01	0.0438

Product	Max Material Processing Rate (lbs/hr)	Max Operation (hrs/day)	Max Throughput (lbs/day)	Max Operation (days/week)	Max Throughput (lbs/week)	Max Operation (weeks/yr)	Max Throughput (lbs/yr)
Milled Sulfur-Based Polymer	2,300	24	55,200	7	386,400	52	20,092,800

NUSTAR LOGISTICS, L.P.
ROSARIO ASPHALT TERMINAL
FUGITIVES [UNIT F-2] -UNCONTROLLED EMISSIONS

FUGITIVE EMISSIONS (ESTIMATED)

SOURCE	HVY LIQUID STREAM	VOC EMISSIONS	H_2S EMISSIONS[1]	TOTAL EMISSIONS
Valves	220			
Emission Factor*	0.0000948			
Reduction Factor**	0			
Emissions (lb/hr)***	0.0209	2.0852E-02	4.1712E-06	2.0856E-02
Flanges	470			
Emission Factor	0.0000172			
Reduction Factor	0			
Emissions (lb/hr)	0.0081	8.0824E-03	1.6168E-06	8.0840E-03
Pump Seals	22			
Emission Factor	0.00117			
Reduction Factor	0			
Emissions (lb/hr)	0.0257	2.5735E-02	5.1480E-06	2.5740E-02
Compressor Seals	N/A			
Emission Factor				
Reduction Factor				
Emissions (lb/hr)		0.0000E+00	0.0000E+00	0.0000E+00
Process Drains	2			
Emission Factor	0.000287			
Reduction Factor	0			
Emissions (lb/hr)	0.0006	5.7389E-04	1.1480E-07	5.7400E-04
Relief Valves	10			
Emission Factor	0.000287			
Reduction Factor	0			
Emissions (lb/hr)	0.0029	2.8694E-03	5.7400E-07	2.8700E-03
Total Emissions (lbs/hr)		0.0581	0.0000	0.0581
ANNUAL EMISSIONS (TONS)[2]		**0.25**	**0.00**	**0.25**

* All emission factors from the EPA Petroluem Terminal Marketing Factors
** Employing the AVO Monitoring program as defined by the Gasoline Terminal MACT Rule
*** Emissions = (No. of Sources)*(Emission Factor)*(1-Reduction Factor)

[1] It was conservatively assumed that all fugitive equipment or components are in contact with a stream containing H_2S and at a similar weight fraction of H_2S (0.0002) found in asphalt vapor.
[2]The facility's Polymer Modified Asphalt (PMA) mill has the potential to emit up to 0.15 TPY of Particulate Matter.

Sample Calculation for Valves in Heavy Liquid Service:
Total Hourly Emission Rate = (220 source counts) (0.0000948 lb/hr-source) = 0.0209 lb/hr
Total Annual Emission Rate = (0.0209 lb/hr) (8760 hr/yr) (ton/2000 lb) = 0.0915 tons/yr
Hourly VOC Emission Rate = (0.0209 lb/hr) (0.9998) = 0.0209 lb VOC/hr
Hourly H_2S Emission Rate = (0.0209 lb/hr) (0.0002) = 0.00000418 lb H_2S/hr

NUSTAR LOGISTICS, L.P.
ROSARIO ASPHALT TERMINAL
CRUDE OIL TRANSLOADING EMISSIONS [UNIT T-LOAD] -
UNCONTROLLED EMISSIONS CALCULATION ASSUMPTIONS

CRUDE OIL TRANSLOADING MAX THROUGHPUT CALCULATION (RAIL CONTRACT-LIMITED 3 SWITCHES/WEEK)		
MAX OPERATING HOURS/DAY	24	HRS
MAX TRUCK CAPACITY	180	BBLS
RAILCAR CAPACITY	660	BBLS
# OF TRUCKS REQUIRED TO FILL ONE RAILCAR	**3.67**	**TRUCKS**
MAX # OF FULL RAILCARS ABLE TO FIT ON RAIL SPUR	**17**	**CARS**
AVERAGE RAILROAD SWITCH TIME	60	MIN
AVERAGE TRANSLOADER MOVE TIME	20	MIN
AVERAGE TRUCK LOAD TIME (INCLUDES HOOKUP/DISCONNECT)	18	MIN
RAILCAR SWITCHES/WEEK (RAILROAD-IMPOSED CONSTRAINT)	3	SWITCHES
TIME TO FILL ONE RAILCAR + MOVE TRANSLOADER TO NEXT CAR	86	MIN
TIME TO FILL MAX # OF RAILCARS + RAILROAD SWITCH TIME	1,522	MIN
DAYS TAKEN TO COMPLETE FULL RAILCAR SWITCH	1.06	DAYS
THROUGHPUT/RAILCAR SWITCH	11,220	BBLS
AVERAGE DAILY THROUGHPUT WITH CONSTRAINTS	4,809	BBLS
MAX ANNUAL THROUGHPUT WITH CONSTRAINTS	**1,755,285**	**BBLS**
POTENTIAL TO EMIT ASSUMPTIONS		
# OF MOTORIZED TRANSLOADERS =	1	TRANSLOADER
# OF UNMOTORIZED TRANSLOADERS =	1	TRANSLOADER

CRUDE OIL TRANSLOADING - EMISSIONS & CONTROL DATA ALL VALUES FROM AP-42 5.2 Transportation And Marketing Of Petroleum Liquids		
SATURATION FACTOR	1.00	SPLASH LOADING IN DEDICATED VAPOR BALANCE SERVICE
COLLECTION EFFICIENCY	**70.0%**	**NO LEAK TEST ASSUMED**
VAPOR RECOVERY EFFICIENCY	**95.0%**	**ASSUMED PER AP-42 5.2**
OVERALL VAPOR CONTROL EFFICIENCY	**66.5%**	**CALCULATED FROM AP-42**
PERMITTING OVERALL VAPOR CONTROL EFFICIENCY	**40.0%**	**[UNIT VBAL]**

7. POTENTIAL TO EMIT SUMMARY

Form "PTE" – Potential to Emit is attached in this section.

Federal Operating Permit Program (40 CFR Part 71)

POTENTIAL TO EMIT (PTE)

For each unit with emissions that count towards applicability, list the emissions unit ID and the PTE for the air pollutants listed below and sum them up to show totals for the facility. You may find it helpful to complete form **EMISS** before completing this form. Show other pollutants not listed that are present in major amounts at the facility on attachment in a similar fashion. You may round values to the nearest tenth of a ton. Also report facility totals in section **J** of form **GIS**.

Emissions Unit ID	Regulated Air Pollutants and Pollutants for which the Source is Major (tons/yr)						
	NOx	VOC	SO2	PM10	CO	Lead	HAP
10-01	-	0.01	-	-	-	-	-
10-02	-	0.01	-	-	-	-	-
10-03	-	0.01	-	-	-	-	-
10-04	-	0.01	-	-	-	-	-
30-01	-	0.03	-	-	-	-	-
30-02	-	0.03	-	-	-	-	-
30-03	-	0.03	-	-	-	-	-
30-04	-	0.03	-	-	-	-	-
HTR-1	10.82	0.60	0.07	0.82	9.09	-	-
HTR-2	8.03	0.44	0.05	0.61	6.75	-	-
BLR-3	7.51	0.41	0.05	0.57	6.31	-	-
LOAD	-	0.07	-	-	-	-	-
F-1	-	0.25	-	-	-	-	-
MILL	-	-	-	0.04	-	-	-
T-LOAD	-	128.13	-	-	-	-	8.8
F-2	-	0.01	-	-	-	-	-
VBAL	-	-	-	-	-	-	-
FACILTY TOTALS	26.36	130.07	0.17	2.19	22.15	-	8.8

8. PART 71 FEES

Form "Fee" – Fee Calculation Worksheet is attached.

Form "FF" – Fee Filing Form is attached.

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

FEE FILING FORM (FF)

Complete this form each time you prepare form FEE and send this form to the appropriate lockbox bank address, along with full payment. This form required at time of initial fee payment, and thereafter, when paying annual fees.

Source or Facility Name: Rosario Terminal

W)

EPA Region where Source Located: EPA Region 6

Mailing Address:

Street/P.O. Box: 967 NM 16 Road, Pena Blanca, NM 87041 City: Pena Blanca

State: NM ZIP 87041 - _____

Contact Person: Ronnie Fernandez Title: Terminal Manager

Telephone: (505) 603 - 4227 Ext. _____

Total Fee Payment Remitted: $ 218.07

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 06/30/2015

Federal Operating Permit Program (40 CFR Part 71)

FEE CALCULATION WORKSHEET (FEE)

Use this form initially, or thereafter on an annual basis, to calculate part 71 fees.

A. General Information

Type of fee (Check one): _X_ Initial ___ Annual

Deadline for submitting fee calculation worksheet N/A – Initial fee calculation worksheet attached to the application.

For initial fees, emissions are based on (Check one):

_X_ Actual emissions for the preceding calendar year. (Required in most circumstances.)

___ Estimates of actual emissions for the current calendar year. (Required when operations commenced during the preceding calendar year.)

Date commenced operations ____ _____

___ Estimates of actual emissions for the preceding calendar year. (Optional after a part 71 permit was issued to replace a part 70 permit, but only if initial fee payment is due between January 1 and March 31; otherwise use actual emissions for the preceding calendar year.)

For annual fee payment, you are required to use actual emissions for the preceding calendar year.

B. Source Information: Complete this section only if you are paying fees but not applying for a permit.

Source or facility name _____

Mailing address: Street or P.O. Box _____

City_____ State_____ ZIP_____ - _____

Contact person_____ Title_____

Telephone (_____) _____ - _____ Ext_____ Part 71 permit no. _____

C. Certification of Truth, Accuracy and Completeness: Only needed if not submitting a separate form CTAC.

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in this submittal (form and attachments) are true, accurate and complete.

Name (signed) _____

Name (typed) _____ Date:____ /____ /_____

D. Annual Emissions Report for Fee Calculation Purposes -- Non-HAP

You may use this to report actual emissions (tons per year) of regulated pollutants (for fee calculation) on a calendar-year basis for both initial and annual fee calculation purposes. Section E is designed to report HAP emissions. Quantify all actual emissions, including fugitives, but do not include insignificant emissions and certain regulated air pollutants that are not counted for fee purposes, such as CO (see instructions). You may round to the nearest tenth of a ton on this form. Sum the emissions in each column and enter a subtotal at the bottom of the page. If any subtotal exceeds 4,000 tons, enter 4,000 for that column.

This data is for 2014 (year)

Emission Unit ID	NOx	CO	VOC	SO2	PM10	Lead	Other
10-01			0.00023				
10-02			0.00023				
10-03			0.00023				
10-04			0.00029				
30-01			0.00086				
30-02			0.00074				
30-03			0.00073				
30-04			0.00097				
HTR-1	0.51	0.43	0.028	0.003	0.04		
HTR-2	0.51	0.43	0.028	0.003	0.04		
BLR-3	0.55	0.24	0.04	0.004	0.04		
F-1			0.02				
Load			0.07				
MILL					0.04		
T-Load			1.4				
F-2			0.0046				
SUBTOTALS	1.57	1.1	1.6	0.01	0.16		

E. Annual Emissions Report for Fee Calculation Purposes -- HAP

HAP Identification. Identify individual HAP emitted at the facility, identify the CAS number, and assign a unique identifier for use in the second table in this section. Whenever assigning identifier codes, use "HAP1" for the first, "HAP2" for the second, and so on.

Name of HAP	CAS No	Identifier
Total HAPs	N/A	HAP1

HAP Emissions. Report the actual emissions of individual HAP identified above. Use the identifiers assigned in the table above. Include all emissions, including fugitives, and do not include insignificant emissions. You may round to the nearest tenth of a ton. Sum the emissions in each column and enter a subtotal at the bottom of the page. If any subtotal exceeds 4,000 tons, enter 4,000.

This data is for 2014 (year)

Emissions Unit ID	Actual Emissions (Tons/Year)							
	HAP1	HAP___	HAP___	HAP___	HAP___	HAP___	HAP___	HAP___
T-Load	0.096							
SUBTOTALS	0.096							

F. Fee Calculation Worksheet

This section is used to calculate the total fee owed for both initial and annual fee payment purposes. Reconciliation is only for cases where you are paying the annual fee and you used any type of estimate of actual emissions when you calculated the initial fee. If you do not need to reconcile fees, only complete line 1-5 and then skip down to lines 21 – 26. See instructions for more detailed explanation.

1. Sum the emissions from section D of this form (non-HAP) and enter the total (tons).	4.4
2. Sum the emissions from section E of this form (HAP) and enter the total (tons).	0.096
3. Sum lines 1 and 2.	4.52
4. Enter the emissions that were counted twice. If none, enter "0."	0
5. Subtract line 4 from line 3, round to the nearest ton, and enter the result here.	4.52

RECONCILIATION
(WHEN INITIAL FEES WERE BASED ON ESTIMATES FOR THE "CURRENT" CALENDAR YEAR)

Only complete lines 6-10 if you are paying the first annual fee and initial fees were based on estimated actual emissions for the calendar year in which you paid initial fees; otherwise skip to line 11 or to line 21.

6. Enter the total estimated actual emissions for the year the initial fee was paid (previously reported on line 5 of the initial fee form).	
7. If line 5 is greater than line 6, subtract line 6 from line 5, and enter the result. Otherwise enter "0."	
8. If line 6 is greater than line 5, subtract line 5 from line 6, and enter the result. Otherwise enter "0."	
9. If line 7 is greater than 0, multiply line 7 by last year's fee rate ($/ton) and enter the result here. This is the underpayment. Go to line 21.	
10. If line 8 is greater than 0, multiply line 8 by last year's fee rate ($/ton) and enter the result here. This is the overpayment. Go to line 21.	

RECONCILIATION
(WHEN INITIAL FEES WERE BASED ON ESTIMATES FOR THE "PRECEDING" CALENDAR YEAR)

Only complete lines 11-20 if you are paying the first annual fee and initial fees were based on estimated actual emissions for the calendar year preceding initial fee payment; otherwise skip to line 21. If completing this section, you will also need to complete sections D and E to report actual emissions for the calendar year preceding initial fee payment.

11. Sum the actual emissions from section D (non-HAP) for the calendar year preceding initial fee payment and enter the result here.	
12. Sum the actual emissions from section E (HAP) for the calendar year preceding initial fee payment and enter the result here.	
13. Add lines 11 and 12 and enter the total here. These are total actual emissions for the calendar year preceding initial fee payment.	
14. Enter double counted emission from line 13 here. If none, enter "0."	
15. Subtract line 14 from line 13, round to the nearest ton, and enter the result here.	

16. Enter the total estimated actual emissions previously reported on line 5 of the initial fee form. These are estimated actual emissions for the calendar year preceding initial fee payment.	
17. If line 15 is greater than line 16, subtract line 16 from line 15, and enter the result here. Otherwise enter "0."	
18. If line 16 is greater than line 15, subtract line 15 from line 16, and enter the result here. Otherwise enter "0."	
19. If line 17 is greater than 0, multiply line 17 by last year's fee rate ($/ton) and enter the result here. This is the underpayment.	
20. If line 18 is greater than 0, multiply line 18 by last year's fee rate ($/ton) and enter the result on this line. This is the overpayment.	
FEE CALCULATION	
21. Multiply line 5 (tons) by the current fee rate ($/ton) and enter the result here.	$218.07
22. Enter any underpayment from line 9 or 19 here. Otherwise enter "0."	0
23. Enter any overpayment from line 10 or 20 here. Otherwise enter "0."	0
24. If line 22 is greater than "0," add it to line 21 and enter the result here. If line 23 is greater than "0," subtract this from line 21 and enter the result here. Otherwise enter the amount on line 21 here. This is the fee adjusted for reconciliation.	$218.07
25. If your account was credited for fee assessment error since the last time you paid fees, enter the amount of the credit here. Otherwise enter "0."	0
26. Subtract line 25 from line 24 and enter the result here. Stop here. This is the total fee amount that you must remit to EPA.	$218.07

9. INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION

This facility does not currently have emission limitations, standards, federally-enforceable permits, or other federal requirements. The Initial Compliance Plan and Compliance Certification form is not applicable. NuStar submitted a synthetic minor permit application in March of 2015 in which NuStar requested to limit the potential to emit of VOC through vapor balancing at the crude oil transloading operation. Upon issuance of the synthetic minor permit, NuStar will have federally enforceable emission limits.

Below is an analysis of regulatory applicability for the facility.

Regulation		Applies To	Comments
40 CFR 50	NAAQS	Facility	This regulation defines national ambient air quality standards. The facility meets all applicable national ambient air quality standards for NO_x, CO, SO_2, H_2S, PM_{10}, and $PM_{2.5}$ under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	N/A	This regulation defines general provisions for relevant standards that have been set under this part. This regulation does not apply as no NSPS subparts apply.
NSPS 40 CFR60.40b Subpart Db	Performance Standards for Industrial-Commercial-Institutional Generating Units	N/A	This regulation establishes standards of performance for industrial-commercial-institutional steam generating units. This regulation does not apply because the facility does not operate any industrial-commercial-institutional steam generating units with heat inputs greater than 100 MMBtu/hr.
NSPS 40 CFR 60, Subpart I	Standards of Performance for Hot Mix Asphalt Facilities	N/A	This regulation establishes performance standards for hot mix asphalt facilities which commenced construction or modification after June 11, 1973. This facility does not meet the definition of a hot mix asphalt facility as defined in §60.91(a) as it is not used to manufacture hot mix asphalt by heating and drying aggregate and mixing with asphalt cement. The facility receives asphalt from refineries and is used as a terminal to store the liquid asphalt cement. The Rosario Terminal distributes different performance grades of liquid asphalt some of which are modified by adding polymer or acid. Therefore the facility is not subject to this regulation.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	N/A	This regulation establishes performance standards for storage vessels for volatile organic liquids for which construction, reconstruction, or modification commenced after July 23, 1984. The tanks at this facility have capacities of 10,000 barrels (420,000 gallons) and 30,000 barrels (1,260,000 gallons). These tanks store liquid with maximum true vapor pressure less than 3.5 kilopascals (kPa). Per §60.110b(b), this subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 (39,890 gallon) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa).

NSPS 40 CFR 60, Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants	N/A	This regulation establishes performance standards for nonmetallic mineral processing plants. This facility does not meet the definition of a nonmetallic mineral processing plant under §60.671. This regulation does not apply.
MACT 40 CFR 63, Subpart A	General Provisions	N/A	This regulation defines general provisions for relevant standards that have been set under this part. This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63, as amended through August 29, 2013. There are no 40 CFR Part 63 regulations that apply to this facility, thus this regulation does not apply.
MACT 40 CFR 63, Subpart LLLLL	National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing	N/A	This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for existing and new asphalt processing and asphalt roofing manufacturing facilities. Per §63.8681(a), this regulation does not apply as the facility is not a major source of HAP emissions.
MACT 40 CFR 63, Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	N/A	This subpart establishes national emission standards for industrial, commercial, and institutional boilers at area sources of HAP. All combustion sources at this facility are gas-fired. Per §63.11195(e), gas-fired boilers are not subject to this regulation. This regulation does not apply.
NESHAP 40 CFR 64	Compliance Assurance Monitoring	N/A	This regulation defines compliance assurance monitoring. Although VOC emissions from crude oil transloading are being controlled to under 100 tpy, crude oil transloading is not subject to an emission limitation or standard. This regulation does not apply.
NESHAP 40 CFR 68	Chemical Accident Prevention	N/A	This regulation applies to owners or operators of stationary sources that have more than a threshold quantity of a regulated substance in a process, as determined under §68.115. This facility does not have more than a threshold quantity of a regulated substance in a process as determined under §68.115. This regulation does not apply.
Title IV – Acid Rain 40 CFR 72	Acid Rain	N/A	This part establishes the acid rain program. This part does not apply because the facility is not covered by this regulation [40 CFR Part 72.6].
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	N/A	This regulation establishes sulfur dioxide allowance emissions for certain types of facilities. This part does not apply because the facility is not the type covered by this regulation [40 CFR Part 73.2].

Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	N/A	This regulation establishes an acid rain nitrogen oxides emission reduction program. This regulation applies to each coal-fired utility unit that is subject to an acid rain emissions limitation or reduction requirement for SO_2. This part does not apply because the facility does not operate any coal-fired units [40 CFR Part 76.1].
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	N/A	This regulation establishes a regulation for protection of the stratospheric ozone. The regulation is not applicable because the facility does not "service", "maintain" or "repair" class I or class II appliances nor "disposes" of the appliances [40 CFR Part 82.1(a)].

10. CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

Form "CTAC" – Certification of Truth, Accuracy, and Completeness is attached.

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 6/30/2015

Federal Operating Permit Program (40 CFR Part 71)

CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (i.e., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official

Name: (Last) Zeringue (First) Jean (MI) ____

Title VP GM Operations

Street or P.O. Box 7167 Koch RD

City St. James State LA ZIP 70086 - _____

Telephone (225) 746 - 2105 Ext. _____ Facsimile (225) 265 - 2116

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed) _____

Name (typed) Jean Zeringue Date: 7/01/2015

INSTRUCTIONS FOR CTAC
CERTIFICATION OF TRUTH, ACURACY, and COMPLETENESS

Information Collection Burden Estimates

The public reporting and recordkeeping burden for this collection of information is estimated to average 209 hours per respondent per year. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

DETAILED INSTRUCTIONS

This form is for the responsible official to certify that submitted documents (i.e., permit applications, updates to application, reports, and any other information required to be submitted as a condition of a permit) are true, accurate, and complete.

This form should be completed and submitted with each set of documents sent to the permitting authority. It may be used at time of initial application, at each step of a phased application submittal, for application updates, as well as to accompany routine submittals required as a term or condition of a permit.

Section A - Title V permit applications must be signed by a responsible official. The definition of responsible official can be found at ' 70.2.

Section B - The responsible official must sign and date the certification of truth, accuracy and completeness. This should be done after all application forms are complete and the responsible official has reviewed the information. Normally this would be the last form completed before the package of forms is mailed to the permitting authority.

11. MATERIAL SAFETY AND DATA SHEETS

Material Safety and Data Sheets (MSDS) are located at the facility and attached in this section.

MATERIAL SAFETY DATA SHEET

ELEMENTAL SULFUR - FLAKED/PASTILLES/FLOWERED

Martin Resources, Inc.
P.O. Box 191
Kilgore, Texas 75663

EMERGENCY ASSISTANCE
MSS - 1-800-356-4421
CHEMTREC: (800)424-9300

	HAZARD RATING SYSTEM: NFPA 704	HMIS	KEY
HEALTH	1	1	4=SEVERE
FLAMMABILITY	1	1	3=SERIOUS
REACTIVITY	0	1	2=MODERATE
			1=SLIGHT
			0=MINIMAL

A. PRODUCT IDENTIFICATION

Synonyms: Brimstone, Elemental Sulfur, Sulfur Flour, Sulphur
Chemical Name: Sulfur
Chemical Family: Non-Metallic Element
Chemical Formula: S
CAS Reg. No.: 7704-34-9

Product and/or Components Entered on EPA's TSCA Inventory: YES

This product has been introduced into U.S. commerce, and is listed in the Toxic Substances Control Act (TSCA) Inventory of Chemicals in Commerce; hence, it is subject to all applicable provisions and restrictions under TSCA 40 CFR, Section 721 and 723.250.

B. HAZARDOUS COMPONENTS

Ingredients	CAS Number	% By Wt.	OSHA PEL	ACGIH TLV	Units
Sulfur	7704-34-9	100	N.E.	N.E.	N.A.

N.E. -Not Established
N.A. -Not Applicable

Powdered sulfur may be considered a nuisance dust by the ACGIH. As such workplace exposures should not exceed 10 mg/m³.

C. PERSONAL PROTECTION INFORMATION

Ventilation:	Use adequate ventilation to control exposure below recommended exposure levels. Avoid inhalation of dust.
Respiratory Protection:	Not generally required. When entering areas containing unknown concentrations, use NIOSH/MSHA approved self-contained breathing apparatus (SCBA).
Eye Protection:	Dust-proof goggles or safety glasses with side shields. Contact lenses may absorb irritants. Particles may adhere to lenses and cause corneal damage. Do not wear contact lenses in work areas.
Skin Protection:	Chemical-resistant gloves and clothing are recommended to avoid prolonged contact. Avoid unnecessary skin contact.

NOTE: Personal protection information shown in Section C is based upon general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

D. HANDLING AND STORAGE PRECAUTIONS

Store in a cool, dry, well-ventilated area, away from incompatible chemicals. Keep away from fire, sparks and flame. Material is corrosive to ferrous and mild steel materials. All handling and storage equipment should be constructed of stainless steel, aluminum, or poly-type materials. Keep containers closed and electrostatically grounded. Powdered sulfur is subject to dust cloud explosions. Engineering of storage facilities should incorporate maximum explosion-proof design.

E. REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Heat, Sparks, Flame, build up of Static Electricity.
Incompatibility (Materials to Avoid): Acids, Alkalies, Halogens, Oxygen and Strong Oxidizing agents. Forms explosive mixtures with oxidizing agents.
Hazardous Polymerization: Will Not Occur.
Hazardous Decomposition Products: Sulfur oxides, Hydrogen Sulfide.

F. HEALTH HAZARD DATA

1. Recommended Exposure Limits: See Section B

2. Acute Effects of Overexposure:

Eye: Exposure to dust can cause eye irritation, characterized by burning, lacrimation, blurred vision, keratitis, and losses of corneal epithelium.

Skin: Exposure to dust can cause skin irritation. Symptoms include reddening, itching, and inflammation.

Inhalation: Sulfur dust is irritating to mucous membranes of respiratory tract. May cause coughing, sore throat, and shortness of breath.

Ingestion: Large doses can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Ingestion of greater than 15 grams may cause production of hydrogen sulfide from bacterial action in colon. Hydrogen sulfide thus produced can cause effects on central nervous system, including convulsions, changes in blood pressure and respiration, respiratory arrest, and possibly death.

3. Subchronic and Chronic Effects of Overexposure:

Skin sensitization has been observed in some people after repeated exposures. Chronic inhalation may cause bronchopulmonary disease which may be complicated by emphysema and bronchiectasis. No evidence for carcinogenicity according to NTP, IARC, NIOSH, OSHA, or ACGIH.

4. Other Health Effects:

None of note.

5. Health Hazard Categories:

	Animal	Human		Animal	Human
Known Carcinogen	—	—	Toxic	—	—
Suspect Carcinogen	—	—	Corrosive	—	—
Mutagen	—	—	Irritant	—	X
Tumorigen	—	—	Target Organ Toxin	—	X
Teratogen	—	—	Specify: eye, respiratory tract irritation		
Allergic Sensitizer	—	—			
Highly Toxic	—	—			

6. First Aid and Emergency procedures:

Eyes: Immediately flush eyes with large amounts of water for at least 15 minutes. Get medical attention.

Skin: Wash affected area with soap and water.

Inhalation: Remove the victim to fresh air. Administer artificial respiration if breathing has stopped. Keep victim at rest. Call for prompt medical attention.

Ingestion: Never give anything by mouth to anyone who is unconscious or convulsing. Give victim about 16 ounces of water. Induce vomiting if victim is responsive. This is most effective within 30 minutes of ingestion.

Have emergency eyewash station available in work area.

G. PHYSICAL DATA

Appearance:	Yellow solid crystals, granules, powder, sticks, or lumps.
Odor:	Odorless
Melting Point:	246°F
Boiling Point:	831°F at 1 atm
Vapor Pressure:	0.0001 mm Hg at 68°F
Vapor Density (Air = 1):	Not Available
Solubility in Water:	Insoluble
Specific Gravity (H_2O = 1):	2.1
Percent Volatile by Volume:	nearly zero
Evaporation Rate (Ethyl Ether = 1):	negligible
Viscosity:	Not Applicable

H. FIRE AND EXPLOSION DATA

Flash Point (Method Used):	370°F (COC)
Autoignition Temperature:	491°F
Flammable Limits (% by Volume in Air):	LEL - not applicable UEL - not applicable
Fire Extinguishing Media:	Dry Chemical, Foam, Carbon Dioxide (CO_2), and Water (Fog or Spray Pattern)
Special Fire Fighting Procedures:	Cool down with water and smother with steam, foam, or dry chemical.

Evacuate area of all unnecessary personnel. Use NIOSH/MSHA approved self-contained breathing apparatus and other protective equipment and/or garments described in Section C if conditions warrant. Sulfur burns with a faint blue flame that may be nearly invisible under certain lighting conditions. Isolate material from fire if possible. Water fog or spray may be used to extinguish fire because the material can be cooled below its flash point. Liquid sulfur in open containers may be extinguished with a fine spray of water. Use of high pressure hose streams must be avoided because of the risk of splattering or causing a steam explosion. Keep quantity of water used to a minimum. Fires in storage tanks can be extinguished by shutting off vents to exclude air. Allow tank contents to cool to below 310°F before opening again.

Fire and Explosion Hazards:

Use extreme caution when applying copious amounts of water to molten sulfur, as large amounts of steam will be generated.

I. SPILL, LEAK AND DISPOSAL PROCEDURES

Precautions required if material is released or spilled:

Evacuate area of all unnecessary personnel. Wear protective equipment and/or garments described in Section C, if conditions warrant. Keep all ignition sources from spill. Uncontaminated material may be reused. Prevent material from entering sewers, watercourses, or low-lying areas. Any spill or release that exceeds the reportable quantity must be reported to local, state, and federal emergency response agencies.

Waste Disposal: Proper land disposal.

J. DOT TRANSPORTATION

1) For Domestic Shipments:

Commodity Name:	Elemental Sulfur - Flaked/Pastilles/Flowered
Shipping Description:	Elemental Sulfur - Flaked/Pastilles/Flowered
Packaging References:	Exempt from requirements (49CFR172.102, Special Provision 30)

2) For International Shipments:

Commodity Name:	Elemental Sulfur - Flaked/Pastilles/Flowered
Label:	Flammable Solid
Shipping Description:	Sulfur, 4.1, UN1350, P.G. III
Packaging References:	49CFR, Sections 172.504, 173.151, 173.240

K. OTHER REGULATORY INFORMATION

Hazardous Substance/RQ - Not Applicable

L. PROTECTION REQUIRED FOR WORK ON CONTAMINATED EQUIPMENT

Contact immediate supervisor for specific instruction before work is initiated. Wear protective equipment and/or garments described in Section C if exposure conditions warrant.

M. HAZARD CLASSIFICATION

This product meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR Section 1910.1200):

_	Combustible Liquid	_	Flammable Aerosol	_	Oxidizer
_	Compressed Gas	_	Explosive	_	Pyrophoric
_	Flammable Gas	_	Health Hazard (Section F)	_	Unstable
_	Flammable Liquid	_	Organic Peroxide	_	Water Reactive
X	Flammable Solid				

_ Based on information presently available, this product does not meet any of the hazard definitions of 29 CFR Section 1910.1200.

N. ADDITIONAL COMMENTS

None.

O. LEGAL DISCLAIMER

While the information contained in the MSDS is believed to be reliable, no guarantee is made as to its accuracy or completeness. The conditions of use, handling, storage, and disposal, and the suitability of the product for particular uses are beyond our control. Consequently, all risks involving the use of the product are assumed by the user. We expressly disclaim all warranties of every kind and nature, express or implied, including the warranties of merchantability and fitness for a particular purpose.

Material Safety Data Sheet

ICL Performance Products LP

RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification

Product Name:	PHOSPHORIC ACID (105% - 118%)
Synonyms:	Polyphosphoric Acid 105C™ and 115C™, Polyphosphoric Acid 105L and 115L
Reference Number:	AST10086
Date:	July 5, 2013

Use of the substance or preparation

Phosphates, phosphate esters and phosphorylation of polyols, electrolyte for fuel cells, refractory bonding, catalyst in organic reactions, and may be used to treat drinking water.

Company/Undertaking Identification

ICL PERFORMANCE PRODUCTS LP
622 Emerson Road - Suite 500
St. Louis, Missouri 63141

Emergency telephone: In USA call CHEMTREC: 1 800 424 9300

Outside the USA, including ships at sea, call CHEMTREC's international and maritime telephone number (collect calls accepted):
+1 (703) 527-3887

In Canada call CANUTEC: 1 613 996 6666

General Information: +1 800 244 6169 (Worldwide)

2. HAZARDS IDENTIFICATION

Classification of the substance/preparation

GHS

Danger

H290 May be corrosive to metals.
H314 Causes severe burns and eye damage.

Prevention:
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

P234 Keep only in original container.

Response:
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

EC classification:
Classification Corrosive
Risk Phrase R34: Causes Burns
Safety Phrase S2, S26, S36, S37, S39, S45

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition

Substance	CAS No.	%w/w	EINECS No.	Risk Phrase
Phosphoric Acid	8017-16-1	100	232-417-0	R34

4. FIRST AID MEASURES

General

This material is an acid; treatment is symptomatic and supportive. Phosphoric acid has irritating effects to mucous membranes.

Eye contact

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove any contact lenses. Get medical attention. If irritation persists, contact an ophthalmologist.

Skin contact

May cause skin irritation. Wash effected area with plenty of soap and water. Get medical attention.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion

IF SWALLOWED, do NOT induce vomiting. Give victim 2-4 glasses of water to drink. Get medical attention. Contact a Poison Control Center. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

5. FIRE FIGHTING MEASURES

Extinguishing media

Not combustible. No special requirements.

Unsuitable extinguishing media

Non-combustible. No special requirement.

Exposure hazard

Not combustible. May gives off toxic fumes (oxides of phosphorus) in a fire. May react with metals to liberate hydrogen, a flammable gas.

Protective equipment

Firefighters should wear self -contained breathing apparatus & personal protective clothing (PPE).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid unnecessary exposure and remove all material from eyes, skin and clothing. Do not ingest or inhale mists of phosphoric acid.

Environmental precautions

Small quantities: Avoid discharge into the environment
Large quantities: May cause pollution. Avoid discharge into the environment. Note methods for cleaning up in the next section.

Methods for cleaning up

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Neutralize washings with a base such as soda ash or lime. Flush residual spill area with large amounts of water.

Approach release from upwind. Stop or control leak using special protective clothing and positive pressure self-contained breathing apparatus. Control run off and isolate discharged material for proper disposal. Polyphosphoric acid reacts with water to product phosphoric acid.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

7. HANDLING AND STORAGE

Handling

Do not get in eyes, on skin, or on clothing.
Avoid breathing mist or vapor.
Do not taste or swallow.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.

Engineering measures

Provide natural or mechanical ventilation to minimize exposure. The use of local mechanical exhaust ventilation is preferred at sources of air contamination such as open process equipment. Consult National Fire Protection Association (NFPA) Standard 91 for design of exhaust systems.

Transfer product from drums to process in closed system (hermetically) and if not possible use effective local exhaust ventilation. Empty drums as thoroughly as possible to facilitate disposal.

For bulk transfer, purge lines with nitrogen to remove residual liquid before disconnect. When unloading bulk vehicles, personnel should wear chemical goggles and rubber or neoprene gloves.

All fittings should be properly secured prior to energizing unloading system. Care should be taken to avoid acid contact when disconnecting lines/hoses after unloading.

For bulk storage type 316L stainless is recommended. Glass, polyethylene and FRP (depending on resin used) are satisfactory, steel, aluminum and type 304 stainless are not recommended

because of rapid or potential corrosion. Vessels should be vented and operated at ambient conditions. Maintenance heat (hot water preferred) may be used to prevent freezing. Dike area around storage tank with sufficient volume to hold entire tank contents.

Storage

Store in plastic, rubber-lined, or 316L stainless steel tanks designed for Phosphoric Acid. Store drums away from heat and out of direct sunlight. Store in a well-ventilated dry area away from alkalis and most metals. Store above freezing point. Contact with reactive metals, i.e. mild steel and aluminum may generate hydrogen that may form and explosive mixture in storage vessels.

For tank inspection, follow manufacturer's recommended safety guidelines (ex. temperature, etc.). In addition, corrosion data for polyphosphoric acid must be followed to match the storage container of choice (ex. stainless, rubber lined, etc.).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

No OSHA vacated Permissible Exposure Limits are listed for Polyphosphoric Acid

For Phosphoric acid

State	Standard	Limit
Australia	Occupation Exposure Limit	1 mg/m^3 8-hr, TWA, 3 mg/m^3 STEL
Austria	Occupation Exposure Limit	MAK 1 mg/m^3 8-hr
Belgium	Occupation Exposure Limit	1 mg/m^3 8-hr. TWA, 3 mg/m^3 STEL
Denmark	Occupation Exposure Limit	1 mg/m^3 8-hr. TWA
Finland	Occupation Exposure Limit	1 mg/m^3 8-hr, TWA, 3 mg/m^3 STEL
France	Occupation Exposure Limit	VME 1 mg/m^3 VLE 3 mg/m^3
Japan	Occupation Exposure Limit	1 mg/m^3 8-hr.
United Kingdom	Occupation Exposure Limit	2 mg/m^3 STEL
United States	Occupation Exposure Limit	1 mg/m^3 8-hr. TWA, 3 mg/m^3 STEL

Respiratory protection

Avoid breathing vapor or mist. Use NIOSH/MSHA approved respiratory protection equipment (full face piece recommended) when airborne exposure limits are exceeded (see below). If used, full-face piece replaces the need for face shield and/or chemical goggles. Refer to U.S. OSHA regulations 29 CFR 1910.134 or European Standard EN 149.

Hand/Skin protection

Wear impervious protective gloves and clothing to prevent contact to skin. Wash immediately if skin is contaminated. Remove contaminated clothing promptly and launder before reuse. Clean personal protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection

Wear chemical goggles, a face shield, and if necessary, a full face respirator when conditions warrant or exceed the Occupation Exposure Limit. Refer to U.S. OSHA regulations 29 CFR 1910.133 or European Standard EN 166.

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information

Chemical Formula:	H_3PO_4
Appearance:	Clear, colorless, syrupy liquid
Odor:	None
Vapor Pressure (100% acid):	0.0285 mm Hg @ 20 °C
Solubility in Water:	Complete

Important health, safety and environmental information

pH	1.7 (as a 1% solution) @ 25°C
% Equivalent H_3PO_4:	105 - 118
Boiling Point °C :	300 to 550
Specific Gravity @ 25 °C /15.5 °C:	1.9 to 2.12
Melting point/Melting range:	105%:29,115%:38°C (subcooled liquid, months) Despite it's high melting points, the acid is usually a liquid at room temperatures, because it can be subcooled without crystallization for a time period ranging from days to months. If solid matter appears, heating will solve solid matter.

Viscosity:

dynamic: 25°C: 105%: 800 cps; 115%: 28000 cps
100°C: 105%: 36 cps; 115%: 500 cps; 118%: 830 cps

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Product is stable under normal conditions of storage and handling.

Conditions to avoid

Incompatible materials.

Materials to avoid

Avoid contact with metals (such as mild steel and aluminum), which may liberate flammable hydrogen gas that can produce an explosion in confined vessels. Avoid contact with materials such as sulfides and sulfites, which could release toxic gases. Be cautious in mixing with strong bases because high heat of reaction can generate steam.

Hazardous decomposition

Phosphorus oxides may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Laboratory data

Data from ICL Performance Products LP single-dose (acute) animal studies with this material are given below:

Oral – rat LD_{50}	1530 mg/kg, slightly toxic
Dermal – rabbit LD_{50}	2740 mg/kg, slightly toxic

Phosphoric Acid has produced no genetic changes in standard tests using bacterial cells.

Additional Information

This material is severely corrosive to steel based on DOT, 49 CFR criteria.

Phosphoric Acid has a low vapor pressure at room temperature and is not expected to present a significant inhalation hazard under ambient conditions. Phosphoric Acid can, however, be irritating to the respiratory tract if inhaled as a mist or if the material is vaporized. The American Conference of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV) for Phosphoric Acid. For further information on this material, please refer to the current edition of the Documentation of The Threshold Limit Values and Biological Exposure Indices.

12. ECOLOGICAL INFORMATION

Environmental toxicity

Phosphoric acid is practically nontoxic to one species of freshwater fish. No toxicity data was located for other freshwater species, algae, or Daphnia magna in a search of the available scientific literature.

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity.

96-hr. LC_{50} Mosquitofish: 138 mg/L, practically nontoxic

Environmental Fate

No specific biodegradation test data was located in a search of the available scientific literature. It was reported in the literature that while acidity of this material may be reduced readily in natural waters, the phosphate may persist indefinitely.

13. DISPOSAL CONSIDERATIONS

European waste catalog number

The data provided in this section is for information only. Please apply the appropriate classification for your waste.

06 01 04 Waste from inorganic chemical processes; phosphoric and phosphorous acid

Disposal considerations

This material when discarded is a hazardous waste as defined by the U.S. Resource Conservation and Recovery Act (RCRA), 40 CFR 261.22, due to its characteristic of corrosivity, EPA hazardous waste number D002. Best Demonstrated Available Treatment (BDAT) as defined by RCRA for D002 characteristic wastes is DEACTIVATION plus meet 40 CFR 268.48 (Universal Treatment Standards) for non-CWA/non-CWA equivalent/non-Class I SDWA systems. Dispose of in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Road/Rail, Sea and Air

IMDG/UN	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Polyphosphoric Acid), 8, III
ICOA/IATA	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Polyphosphoric Acid), 8, III
RID/ADR	UN3264, Corrosive Liquid, Acidic, Inorganic, N.O.S.(Polyphosphoric Acid), 8, III

Canadian TDG UN3264, Corrosive Liquid, Acidic, Inorganic, N.O.S.(Polyphosphoric Acid), 8, III *

US DOT UN3264, Corrosive Liquid, Acidic, Inorganic, N.O.S.(Polyphosphoric Acid), 8, III *

*Reportable Quantity/ Reportable Limit (RQ/RL):
Canadian: Reportable limit (RL) for packages greater than or equal to 230 kg
U.S. DOT: Reportable quantity (RQ) for packages greater than or equal to 5,000 lb

15. REGULATORY INFORMATION

EC label

Hazard symbol:	Corrosive
R34	Causes burns.
S2	Keep out of the reach of children.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36	Wear suitable protective clothing.
S37	Wear suitable protective gloves.
S39	Wear eye/face protection.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Chemical Inventory

USA TSCA:	Listed
Canada DSL:	Listed
EC:	Listed
Japan:	not listed
Australia:	Listed
China:	Listed

Additional Information

WHMIS Classification: D2 (B) - Materials Causing Other Toxic Effects
E - Corrosive Material

SARA Hazard Notification

Hazard Categories Under Title III Rules (40 CFR 370):	Immediate
Section 302 Extremely Hazardous Substances:	Not Applicable
Section 313 Toxic Chemical(s):	Not applicable

CERCLA Reportable Quantity: 5,000 lbs. of phosphoric acid (CAS 7664-38-2)*

*Release of 5,000 lbs. or more of this product into the environment in a 24-hour period requires notification to the U.S. National Response Center (800-424-8802 or 202-426-2675). Since local, state, and federal laws vary; consult your attorney or appropriate regulatory officials for information relating to spill reporting.

FDA: Food grades of phosphoric acid are sanctioned as Generally Recognized as Safe (GRAS) by the U.S. Food and Drug Administration and is codified in 21 CFR 182.1073.

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Products Regulation.

Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.

16. OTHER INFORMATION

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	3	0	1	
Suggested HMIS Rating	3	0	1	K K = Airline hood or mask, gloves, full suit, boots

Reason for revision: Revised section 1. Supersedes MSDS dated: March 25, 2013
Drafted in accordance with ECC Dir 2001/58/EC

Responsible Care ® is a registered trademark of the American Chemistry Council.

LG CHEMICAL LTD.

MATERIAL SAFETY DATA SHEET

PRODUCT: LG CHEM *Luprene 501, Styrene-Butadiene-Styrene Thermoplastic Elastomer* PAGE 1 OF 3

DATE OF ISSUE : Mar. 06, 2004 MSDS NUMBER : SBS-040506

SECTION I - IDENTIFICATION

MANUFACTURER NAME
LG CHEMICAL LTD.

ADDRESS
20 YOIDO-DONG, YONGDUNGPO-GU,
SEOUL 150-721, KOREA

CAS NUMBER *9003-55-8*

REGISTRY GRADE NUMBER
LG CHEM *Luprene 501*

OTHER : THIS MSDS COVER ALL COLORS, IF THERE ARE, OF
Luprene 501

HEAD OFFICE PHONE NUMBER
(02) 3773-7435, SEOUL, KOREA

CHEMICAL COMPOSITION	(WT. %)
STYRENE :	31.0%
BUTADIENE :	69.0%

SECTION II - HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT
NOT A HAZARDOUS MATERIAL

SECTION III - PHYSICAL DATA

BOILING POINT
N. AP.

VAPOR PRESSURE
N. AP.

VAPOR DENSITY
N. AP.

SOLUBILITY IN WATER
INSOLUBLE

APPEARANCE AND ODOR
PELLET, ODORLESS

SPECIFIC GRAVITY
0.94

PERCENT VOLATILE
N. E.

EVAPORATION RATE
N. AP.

FLASH POINT
>288℃

FIRING POINT
440℃

▶ ABBREVIATIONS : N. E = NOT ESTABLISHED, N. AP. = NOT APPLICABLE
N. AV. = NOT AVAILABLE

- to be continued -

LG CHEMICAL LTD.

MATERIAL SAFETY DATA SHEET

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FIRE EXTINGUISHING METHOD	DRY CHEMICAL POWDER, APPROPRIATE FOAM, WATER SPRAY,CARBON DIOXIDE
SPECIAL FIRE FIGHTING PROCEDURES	WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
UNUSUAL FIRE/EXPLOSION HAZARDS	EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION V - HEALTH HAZARD DATA

ACUTE EFFECTS OF OVEREXPOSURE

MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.

EYE CONTACT RBT 500 MG/24H MLD 85JCAE - ,1407,88

RTECS #: WL6478000 STYRENE POLYMER WITH 1, 3-BUTADIENE

ONLY SELECTED EFFECTS ARE SHOWN HERE. FOR COMPLETE INFORMATION, PLEASE SEE THE ACTUAL ENTRY OF RETCS WL6478000.

EMERGENCY FIRST AID PROCEDURES

INHALATION	MOVE PERSON TO THE AREA OF FRESH AIR
SKIN CONTACT & ABSORPTION	FOR BURNS, GET MEDICAL ATTENTION IMMEDIATELY. IMMEDIATELY FLUSH WITH COPIOUS AMOUNT OF CLEAN WATER.
INGESTION	WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS FIRST SECURE THE RESIPIRATORY PATH IF THE PERSON VOMITS. GET MEDICAL ATTENTION.

CHRONIC EFFECTS OF OVEREXPOSURE

N. E.

OTHER INFORMATION :

EXCESSIVE EXPOSURES TO THE PRODUCT ITSELF SHOULD BE PREVENTED BY THE APPROPRIATE PROTECTIVE CLOTHING, GLOVES AND RESPIRATORS.

- to be continued -

LG CHEMICAL LTD.

MATERIAL SAFETY DATA SHEET

SECTION VI - REACTIVITY DATA

STABILITY
STABLE

CONDITIONS TO AVOID
EXCESSIVE HEAT AND FLAME

INCOMPATIBILITY (MATERIAL TO AVOID)
STRONG OXIDIZING AGENT

HAZARDOUS DECOMPOSITION PRODUCTS
N AP.

HAZARDOUS POLYMERIZATION
N. AP

SECTION VII - SPILL AND DISPOSAL PROCEDURES

STEP TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES. SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL AREA AFTER MATERIAL PICK UP IS COMPLETE.
WASTE DISPOSAL METHOD	DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND,BURN IN A CHEMICAL INCINERATOR WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL ENVIRONMENTAL REGULATIONS.

SECTION VIII - SPECIAL PROTECTION EQUIPMENTS

CHEMICAL SAFETY GOGGLES
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
APPROVED RESPIRATOR.
SAFETY SHOWER AND EYE BATH
MECHANICAL EXHAUST REQUIRED
DO NOT INHALE DUST.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
WASH THROUGHLY AFTER HANDLING.

SECTION IX - HANDLING AND STORAGE PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

KEEP CONTAINER CLOSED.
STORE IN A COOL AND DRY PLACE.

Conditions to Avoid:
Avoid contact with strong oxidizing agents. Accumulation of product in areas exposed to elevated temperatures for extended periods in air may result in self-heating and auto ignition. Avoid elevated temperatures in storage for prolonged periods of time.
(example: 5days at 200 Degrees F or 93 Degrees C)