NuStar Logistics, L.P.

Regional Office Address for Correspondence on this matter:
400 Grove Rd.
West Deptford, NJ 08066
Telephone (856) 579-5063

March 10, 2015

Submission via UPS

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

Re: **Submission of Initial Synthetic Minor Source Permit for Existing Source**
Federal Minor New Source Review Program in Indian Country
NuStar Logistics, L.P. (**Rosario Terminal**)
967 NM 16 Road
Pena Blanca, NM 87041

Dear Sir or Madam:

NuStar Logistics, L.P. (herafter "NuStar") operates the Rosario Asphalt Terminal located on the Santo Domingo Pueblo in New Mexico. NuStar is currently operating and registered under NAICS 493190 and SIC 4226. The attached *Synthetic Minor Application* (on Form SYNMIN) is being submitted per 40 CFR 49.151(c)(1)(i)(B).

On September 30, 2014, NuStar submitted an updated Tribal NSR Registration for the above referenced facility to include the operation of crude oil transloading at the facility. The facility became a Title V Major Source with the addition of the crude loading operation. In the attached synthetic minor permit application, NuStar is requesting to limit the potential to emit (PTE) at the facility with the addition of a control device. The crude loading operation at the facility is controlled using vapor balancing. With this application, the federally enforceable limits at the facility will be below Title V Major thresholds and the facility will become a synthetic minor source with regards to Title V permitting.

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 (856) 579-5063 or Stephen.Doyle@NuStarEnergy.com.

Sincerely,

Stephen J. Doyle
Sr. Mgr. Environmental

Attachments (46 pages)

***CC**: RF, CW, EM*

Date Mailed: 2015-03-10 via UPS
UPS Tracking #: 1Z37V32E0296498658

File: PT : RAT : 32

United States Environmental Protection Agency Program Address Phone Fax Web address	*EPA Region 6* *Bonnie Braganza* *US EPA Region 6* *Air Permits Section* *Multimedia Permitting & Planning Division* *Phone: 214-665-7340*

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Application For Synthetic Minor Limit

(Form SYNMIN)

Please submit information to:

EPA Region 6
Bonnie Braganza
US EPA Region 6
Air Permits Section / Multimedia Permitting & Planning Division
Phone: 214-665-7340

A. GENERAL INFORMATION

Company Name NuStar Logistics, L.P.	**Source Name** Rosario Terminal	
Company Contact or Owner Name Stephen Doyle		Title Sr Manager Environmental
Mailing Address 400 Grove Road		
Email Address Stephen.Doyle@nustarenergy.com		
Telephone Number 856-579-5063	Facsimile Number 210-918-5619	

B. ATTACHMENTS

For each criteria air pollutant, hazardous air pollutant and for all emission units and air pollutant-generating activities to be covered by a limitation, include the following:

☒ **Item 1 -** The proposed limitation and a description of its effect on current actual, allowable and the potential to emit.
☒ **Item 2 -** The proposed testing, monitoring, recordkeeping, and reporting requirements to be used to demonstrate and assure compliance with the proposed limitation.
☐
☒ **Item 3 -** A description of estimated efficiency of air pollution control equipment under present or anticipated operating conditions, including documentation of the manufacturer specifications and guarantees.
☐
☒ **Item 4 -** Estimates of the Post-Change Allowable Emissions that would result from compliance with the proposed limitation, including all calculations for the estimates.
☒ **Item 5 –** Estimates of the potential emissions of Greenhouse Gas (GHG) pollutants:

Instructions

Use this form to provide general and summary information about the synthetic minor NSR source (source or plant) on Tribal lands and to indicate the emissions limitations requested. Submit this form once, in addition to FORM NEW, for each synthetic minor NSR source on Tribal lands. See attachments - Page 5 / 46

1. Who Can Request Federally-Enforceable Limitations Under the Tribal NSR Authority?

The Tribal NSR Rule applies only to sources located within the exterior boundaries of an Indian reservation in the United States of America or other lands as specified in 40 CFR part 49, collectively referred to as "Indian country". So, to use the authority in the Tribal NSR Rule to create federally-enforceable limitations, a source must be located within Indian country. Land ownership status (for example, whether the land is owned by a Tribal member or whether the land is owned in fee or in trust) does not affect how the rule applies.

2. Who Might Want to Request Federally-Enforceable Limitations?

The primary reason for requesting federally-enforceable limitations is to avoid an otherwise applicable federal Clean Air Act program, rule or requirement. Many federal Clean Air Act programs use a source's "potential to emit" (PTE) air pollution to determine which rules or requirements apply. A source's PTE is based on the maximum annual operational (production, throughput, etc) rate of the source taking into consideration the capacity and configuration of the equipment and operations. Emission or operational limits can also be taken into consideration as maximums if they are federally enforceable. So, using a synthetic minor NSR permit to establish federally enforceable limitations can lower a source's PTE and possibly allow the source to avoid certain federal Clean Air Act requirements.

Three examples of federal Clean Air Act programs that use PTE to determine whether they apply are (1) the Prevention of Significant Deterioration (PSD) construction permitting program, (2) the Title V operating permit program, and (3) the Maximum Achievable Control Technology (MACT) program. For example, existing sources that are considered "major" for Title V (meaning they have the potential to emit air pollution at levels defined in that rule as "major") must apply for a Title V operating permit. If a source accepts a federally-enforceable limitation through a synthetic minor NSR permit that reduces their PTE to below the "major" threshold, and the source does not meet any of the other requirements that would trigger applicability to the part 71 program, then the source no longer needs a Title V operating permit. When planning for the construction of a new source or expansion of an existing source, a source can also accept limitations on PTE (using a synthetic minor NSR permit) that allow the source to avoid PSD. Limitations on PTE can similarly help a source to avoid new MACT standards that would otherwise apply to the source.

3. Section B. ATTACHMENTS

This section lists the information that must be attached to the application form for each requested limitation. The requested limitation(s) must be described for each affected emissions unit (or pollutant-generating activity) and pollutant and must be accompanied by the supporting information listed on the form and described below. Note that applicability of many federal Clean Air Act requirements (such as Title V, PSD and MACT) is often based on source-wide emission levels of specific pollutants. In that case, all emissions units at a source and all pollutants regulated by that given rule or regulation must be addressed by this section of the application form.

Item 1 – The requested limitation and its effect on actual emissions or potential to emit must be presented in enough detail to document how the limitation will limit the source's actual or potential emissions as a legal and practical matter and, if applicable, will allow the source to avoid an otherwise applicable requirement. The information presented must clearly explain how the limitation affects each emission unit and each air pollutant from that emission unit. Use the information provided in response to Item 4 below to explain how the limitation affects emissions before and after the limitation is in effect.

Item 2 – For each requested limitation, the application must include proposed testing, monitoring, recordkeeping and reporting that will be used to demonstrate and assure compliance with the limitation. Testing approaches should incorporate and reference appropriate EPA reference methods where applicable. Monitoring should describe the emission, control or process parameters that will be relied on and should address frequency, methods, and quality assurance.

Item 3 – The application must include a description and estimated efficiency of air pollution control equipment under present or anticipated operating conditions. For control equipment that is not proposed to be modified to meet the requested limit, simply note that fact; however, for equipment that is proposed to be modified (e.g. improved efficiency) or newly installed to meet the proposed limit, address both current and future descriptions and efficiencies. Include manufacturer specifications and guarantees for each control device.

Items 4 – Any emission estimates submitted to the Reviewing Authority must be verifiable using currently accepted engineering criteria. The following procedures are generally acceptable for estimating emissions from air pollution sources:

(i) Source-specific emission tests;
(ii) Mass balance calculations;
(iii) Published, verifiable emission factors that are applicable to the source. (i.e., manufacturer specifications).
(iv) Other engineering calculations; or
(v) Other procedures to estimate emissions specifically approved by the Reviewing Authority.

Post-Change Allowable Emissions: A source's allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

Item 5 - New construction projects that have the potential to emit GHG emissions of at least 100,000 tpy CO_2e and 100 or 250 tpy on a mass basis, modifications at existing PSD facilities that increase GHG emissions by at least 75,000 tpy CO_2e and minor sources that increase GHG emissions by at least 100,000 tpy CO_2e and 100 or 250 tpy on a mass basis are subject to PSD permitting requirements, even

if they do not significantly increase emissions of any other pollutant. As such, any requested limits to avoid PSD must take into account greenhouse gases.

Therefore, please include in your permit application estimates of the potential emissions of the following pollutants. More information about GHG permitting and how to calculate CO_2 equivalents (CO_2e), the mass emissions of each individual GHG adjusted for its Global Warming Potential (GWP) can be found at: http://epa.gov/nsr/ghgdocs/ghgpermittingguidance.pdf

1. Carbon dioxide (CO_2)
2. Methane (CH_4) and its CO_2e
3. Nitrous oxide (N_2O) and its CO_2e
4. Hydrofluorocarbons (HFCs) and its CO_2e
5. Perfluorocarbons (PFCs) and its CO_2e
6. Sulfur hexafluoride (SF_6) and its CO_2e

The GHG emissions resulting from this facility's operations are restricted to 1. Carbon Dioxide, 2. Methane, and 3. Nitrous Oxide. The GHG emissions resulting from the facility's operations are restricted to CO2, CH4, and N2O.

	Greenhouse Gases			
	GHG	Total TPY	GWP	CO_{2e} TPY
1)	CO_2	21328.80	1	21328.80
2)	CH_4	0.41	25	10.20
3)	N_2O	0.39	298	116.52
			Total	21455.52

United States Environmental Protection Agency
Program
Address
Phone
Fax
Web address

EPA Region 6
Bonnie Braganza
US EPA Region 6
Air Permits Section
Multimedia Permitting & Planning Division
Phone: 214-665-7340

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Application for New Construction

(Form NEW)

Please check all that apply to show how you are using this form:

- ☐ **Proposed Construction of a New Source**
- ☐ **Proposed Construction of New Equipment at an Existing Source**
- ☒ **Proposed Modification of an Existing Source**
- ☐ **Other – Please Explain**

Please submit information to:

EPA Region 6
Bonnie Braganza
US EPA Region 6
Air Permits Section / Multimedia Permitting & Planning Division
Phone: 214-665-7340

A. GENERAL SOURCE INFORMATION

1. (a) **Company Name** NuStar Logistics, L.P. (b) **Operator Name** NuStar Logistics, L.P.		2. **Source Name** Rosario Terminal	
3. Type of Operation Liquid Asphalt Plant and Crude Oil Transloading		4. Portable Source? ☐ Yes ☒ No 5. Temporary Source? ☐ Yes ☒ No	
6. NAICS Code 493190		7. SIC Code 4226	
8. Physical Address (home base for portable sources) 967 NM 16 Road, Pena Blanca, NM 87041			
9. Reservation* Santo Domingo	10. County* Sandoval	11a. Latitude* 35 ° 28 ' 54.20 " N	11b. Longitude* 106 ° 13 ' 42.57 " W
12a. Quarter Quarter Section* SW ¼	12b. Section* S32	12c. Township* T15N	12d. Range* R7E

*Provide all proposed locations of operation for portable sources

B. PREVIOUS PERMIT ACTIONS (Provide information in this format for each permit that has been issued to this source. Provide as an attachment if additional space is necessary)

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

This facility does not have any existing air permits.

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

C. CONTACT INFORMATION

Company Contact Ronnie Fernandez	Title Terminal Manager
Mailing Address 967 NM 16 Road, Pena Blanca, NM 87041	
Email Address Ronnie.Fernandez@nustarenergy.com	
Telephone Number 505-603-4227	Facsimile Number 210-918-5509
Operator Contact (if different from company contact)	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number
Source Contact Ronnie Fernandez	Title Terminal Manager
Mailing Address 967 NM 16 Road, Pena Blanca, NM 87041	
Email Address Ronnie.Fernandez@nustarenergy.com	
Telephone Number 505-603-4227	Facsimile Number 210-918-5509
Compliance Contact Stephen Doyle	Title Sr. Manager Environmental
Mailing Address 400 Grove Road, West Deptford, NJ 08066	
Email Address Stephen.Doyle@nustarenergy.com	
Telephone Number 856-579-5063	Facsimile Number 210-918-5619

D. ATTACHMENTS

Include all of the following information (see the attached instructions)

☒ **FORM SYNMIN -** New Source Review Synthetic Minor Limit Request Form, if synthetic minor limits are being requested.

☒ Narrative description of the proposed production processes. This description should follow the flow of the process flow diagram to be submitted with this application. See attachments - Page 20 / 46

☒ Process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment. See attachments - Page 23 / 46

☒ A list and descriptions of all proposed emission units and air pollution-generating activities. See attachments - Pages 20-21 / 46

☒ Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis. See attachments - Page 21 / 46

☒ Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis. See attachments - Page 21 / 46

☒ Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year. See attachments - Page 21 / 46

☒ A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity. See attachments - Page 21 / 46

☒ **Criteria Pollutant Emissions -** Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

These estimates are to be made for each emission unit, emission generating activity, and the project/source in total.

☐ **Modeling – Air Quality Impact Analysis (AQIA)**
AQIA Not Required - see page 17 / 46

☒ **ESA (Endangered Species Act)**
Endangered Species unaffected - see attached ESA printout for Sandoval County, NM (Page 45 / 46)

☒ **NHPA (National Historic Preservation Act)**
None in Sandoval County, NM - see attached NHPA printout (Page 46 / 46)

E. TABLE OF ESTIMATED EMISSIONS

The following tables provide the total emissions in tons/year for all pollutants from the calculations required in Section D of this form, as appropriate for the use specified at the top of the form.

E(i) – Proposed New Source

Pollutant	Potential Emissions (tpy)	Proposed Allowable Emissions (tpy)
PM		
PM_{10}		
$PM_{2.5}$		
SO_x		
NO_x		
CO		
VOC		
Pb		
Fluorides		
H_2SO_4		
H_2S		
TRS		
RSC		

Not Applicable
(Not a new source)

PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns in size
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in size
SOx - Sulfur Oxides
NOx - Nitrogen Oxides
CO - Carbon Monoxide
VOC - Volatile Organic Compound
Pb - Lead and lead compounds
Fluorides - Gaseous and particulates
H_2SO_4 - Sulfuric Acid Mist
H_2S - Hydrogen Sulfide
TRS - Total Reduced Sulfur
RSC - Reduced Sulfur Compounds

Emissions calculations must include fugitive emissions if the source is one the following listed sources, pursuant to CAA Section 302(j):

(a) Coal cleaning plants (with thermal dryers);
(b) Kraft pulp mills;
(c) Portland cement plants;
(d) Primary zinc smelters;
(e) Iron and steel mills;
(f) Primary aluminum ore reduction plants;
(g) Primary copper smelters;
(h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
(i) Hydrofluoric, sulfuric, or nitric acid plants;
(j) Petroleum refineries;
(k) Lime plants;
(l) Phosphate rock processing plants;
(m) Coke oven batteries;
(n) Sulfur recovery plants;
(o) Carbon black plants (furnace process);
(p) Primary lead smelters;
(q) Fuel conversion plants;
(r) Sintering plants;
(s) Secondary metal production plants;
(t) Chemical process plants
(u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
(v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(w) Taconite ore processing plants;
(x) Glass fiber processing plants;
(y) Charcoal production plants;
(z) Fossil fuel-fired steam electric plants of more that 250 million British thermal units per hour heat input, and
(aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

E(ii) – Proposed New Construction at an Existing Source or Modification of an Existing Source

Pollutant	Current Actual Emissions (tpy)	Current Allowable Emissions (tpy)	Post-Change Potential Emissions (tpy)	Post-Change Allowable Emissions (tpy)
PM	1.55	1.55	1.55	1.55
PM_{10}	1.55	1.55	1.55	1.55
$PM_{2.5}$	1.55	1.55	1.55	1.55
SO_x	0.11	0.11	0.11	0.11
NO_x	17.77	17.77	17.77	17.77
CO	14.93	14.93	14.93	14.93
VOC	129.62	129.62	129.62	78.51
Pb	N/A (0.0)	N/A (0.0)	N/A (0.0)	N/A (0.0)
Fluorides	N/A (0.0)	N/A (0.0)	N/A (0.0)	N/A (0.0)
H_2SO_4	N/A (0.0)	N/A (0.0)	N/A (0.0)	N/A (0.0)
H_2S	0.00	0.00	0.00	0.00
TRS	0.00	0.00	0.00	0.00
RSC	0.01	0.01	0.01	0.01

Post-Change Allowable Emissions reflect 40% VOC control efficiency of vapor balancing on transloading operation.

PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns in size
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in size
SOx - Sulfur Oxides
NOx - Nitrogen Oxides
CO - Carbon Monoxide
VOC - Volatile Organic Compound
Pb - Lead and lead compounds
Fluorides - Gaseous and particulates
H_2SO_4 - Sulfuric Acid Mist
H_2S - Hydrogen Sulfide
TRS - Total Reduced Sulfur
RSC - Reduced Sulfur Compounds

[Disclaimers] The public reporting and recordkeeping burden for this collection of information is estimated to average 20 hours per response, unless a modeling analysis is required. If a modeling analysis is required, the public reporting and recordkeeping burden for this collection of information is estimated to average 60 hours per response .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.

Instructions

Use of This Form

- Proposed new construction or modifications should first be evaluated to determine if the change is major under the major NSR program using the procedures at 40 CFR 52.21 (i.e., baseline actual to projected actual applicability test). If the proposed construction does not qualify as a major under that test, then it may be subject to the requirements of the minor NSR rule at 40 CFR 49.151.

Helpful Definitions from the Federal Minor NSR Rule (40 CFR 49) – This is not a comprehensive list.

- *40 CFR 49.152(d) - Modification* means any physical or operational change at a source that would cause an increase in the allowable emissions of the affected emissions units for any regulated NSR pollutant or that would cause the emission of any regulated NSR pollutant not previously emitted.

  The following exemptions apply:

  (1) A physical or operational change does not include routine maintenance, repair, or replacement.

  (2) An increase in the hours of operation or in the production rate is not considered an operational change unless such increase is prohibited under any federally-enforceable permit condition or other permit condition that is enforceable as a practical matter.

  (3) A change in ownership at a source is not considered a modification.

- *40 CFR 49.152(d) - Allowable emissions* means ‘‘allowable emissions’’ as defined in §52.21(b)(16), except that the allowable emissions for any emissions unit are calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit’s potential to emit.

- *52.21(b)(16) - Allowable emissions* means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

  (i) The applicable standards as set forth in 40 CFR parts 60 and 61;

  (ii) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or

  (iii) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

A. General Source Information

1. Company Name & Operator Name (if different): Provide the complete company and operator names. For corporations, include divisions or subsidiary name, if any.

2. Source Name: Provide the source name. Please note that a source is a site, place, location, etc… that may contain one or more air pollution emitting units.

3. Type of Operation: Indicate the generally accepted name for the operation (i.e., asphalt plant, gas station, dry cleaner, sand & gravel mining, oil and gas wellsite, tank battery, etc.).

4. Portable Source: Does the source operate in more than one location? Some examples of portable sources include asphalt batch plants and concrete batch plants.

5. Temporary Source: A temporary source, in general, would have emissions that are expected last less than 12 months. Do you expect to cease operations within the next 12 months?

6. NAICS Code: North American Industry Classification System. The NAICS Code for your source can be found at the following link → North American Industry Classification System (http://www.census.gov/epcd/naics/nsic2ndx.htm#S1).

7. SIC Code: Standard Industrial Classification Code. Although the new North American Industry Classification System (NAICS) has replaced the SIC codes, much of the Clean Air Act permitting processes continue to use these codes. The SIC Code for your source can be found at the following link → Standard Industrial Classification Code (http://www.osha.gov/pls/imis/sic_manual.html).

8. Physical Address: Provide the actual address of where the source is operating, not the mailing address. Include the State and the ZIP Code.

9. Reservation: Provide the name of the Indian reservation within which the source is operating.

10. County: Provide the County within which the source is operating.

11a & 11b. Latitude & Longitude: These are GPS (global positioning system) coordinates. This information can be provided in decimal format or degree-minute-second format.

12a – 12d. Section-Township-Range: Please provide these coordinates in 1/4 Section/Section/Township/Range. (e.g., SW ¼, NE ¼ /S36/T10N/R21E).

B. Current Permit Information

Provide a list of all permits that have been issued to your source. This should include any Federal Minor New Source Review (MNSR), Prevention of Significant Deterioration (PSD) or Non-Attainment New Source Review (NA NSR) permits, in addition to the most recent Part 71 permit. The permit number must be included with each permit identified.

C. Contact Information

Please provide the information requested in full.

1. Company Contact: List the full name (last, middle initial, first) of the owners of the source or the company contact.

2. Operator Contact: Provide the name of the operator of the source if it is different from the company contact.

3. Source Contact: The source contact must be the local contact authorized to receive requests for data and information.

4. Compliance Contact: The compliance contact must be the local contact responsible for the source's compliance with this rule. If this is the same as the Source Contact please note this on the form.

D. Attachments

This section lists the information needed to complete the requested approval. This information should be accompanied by the supporting information listed on the form and described below. The information should be presented in enough detail to document how the source is currently operating and/or how it is proposed to operate.

☒ **FORM SYNMIN**

If synthetic minor limits are being requested, a synthetic Minor Limit Application should be included with this application.

☒ Narrative description of the proposed production processes. See attachments - Page 20 / 46

1. The narrative description should follow the flow of the process flow diagram to be submitted with this application. This needs to be as comprehensive as possible to help in understanding the proposed source and how it will be operated. For example:

What are the raw materials?
What are the properties of the raw materials?
Does the production process include heating, drying, the application of chemicals, etc?
How will the raw materials be affected by this process?
What are the out puts from each step of the process (i.e., crushed ore, dry gas, water, etc…)?
Etc….

2. The proposed operating schedule presented in terms of hours per day, days per week, and weeks per year.
3. A list of the type and quantity of fuels and/or raw materials used. Each fuel and raw material should be described in enough detail to indicate its basic chemical components.

☒ A process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment (include the unit identification # or code). This flow chart should illustrate the detailed narrative description requested above. See attachments - Page 23 / 46

☒ List and describe all proposed units, emission units and air pollution-generating activities. At a minimum, provide the following: See attachments - Pages 21-22 / 46

1. The hourly, daily and annual maximum operating rates for each operating unit, production process, and activity.
2. The hourly, daily and annual maximum firing rates for each fuel and combustion equipment.
3. The capacity for storage units and the hourly, daily and annual maximum throughput of material in the storage units.
4. Material and product handling equipment and the hourly, daily and annual maximum throughput of material and product.
5. Tank designs, tank storage capacities, hourly, daily and annual maximum throughput of material and product.

☒ Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis. See attachments - Page 21 / 46

☒ Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis. See attachments - Page 21 / 46

☒ Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year. See attachments - Page 21 / 46

☒ A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity. See attachments - Page 21 / 46

1. Include manufacturer specifications and guarantees for each control device.

Criteria Pollutant Emissions Estimates

See attachments - Pages 24-44 / 46

☒ Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH_3), fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

1. These estimates are to be made for each emission unit, emission generating activity, in addition to total emissions.

2. The information should include all of the supporting calculations, assumptions and references. Emission estimates must address all emission units and pollutants proposed and/or affected by the limitation and be presented in short term (e.g. pounds per hour) as well as annual (tons per year) units.

3. Any emission estimates submitted to the Regional Administrator must be verifiable using currently accepted engineering criteria. The following procedures are generally acceptable for estimating emissions from air pollution sources:

   - Source-specific emission tests;
   - Mass balance calculations;
   - Published, verifiable emission factors that are applicable to the source. (i.e. manufacturer specifications)
   - Other engineering calculations; or
   - Other procedures to estimate emissions specifically approved by the Regional Administrator.

4. Guidance for estimating emissions can be found at http://www.epa.gov/ttn/chief/efpac/index.html.

Current Actual Emissions: Current actual emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the actual hourly emissions rate in pounds per hour (lbs/hr) times actual hours operated (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. For an **existing air pollution source (permitted and unpermitted)** that operated prior to the application submittal, the current actual emissions are the actual rate of emissions for the preceding calendar year and must be calculated using the actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year. The emission estimates must be based upon actual test data or, in the absence of such data, upon procedures acceptable to the Regional Administrator.

Current Allowable Emissions: Current allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. "Allowed" means the source is restricted by permit conditions that limit its emissions and are enforceable as a practical matter (i.e., allowable emissions). The allowable emissions for any

emissions unit are calculated considering any emissions limitations that are enforceable as a practical matter on the unit's PTE.

2. For an **existing permitted air pollution source** that operated prior to the application submittal, the current allowable emissions are the allowable rate of emissions for the preceding calendar year and must be calculated using the permitted operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year.

3. For an **existing air pollution source** that does not have an established allowable emissions level prior to the modification must report the pre-change uncontrolled emissions.

Post-Change Potential Emissions (Potential uncontrolled emissions from proposed project): This is the maximum capacity of a source to emit a pollutant under its physical and operational design. This is expressed in tpy and generally is calculated by multiplying the maximum hourly emissions rate in pounds per hour (lbs/hr) times 8,760 hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

Post-Change Allowable Emissions: A source's allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. Unless the source is restricted by permit conditions or other requirements that are enforceable as a practical matter, the post-change allowable emissions would be equivalent to post-change uncontrolled emissions. For the post-change allowable emissions a lower level of allowable emissions may be proposed.

2. For physical or operational changes at minor sources and for minor physical or operational changes at major sources, the total increase in allowable emissions resulting from your proposed change would be the sum of following:

   - For each new emissions unit that is to be added, the emissions increase would be the potential to emit of each unit.
   - For each emissions unit with an allowable emissions limit that is to be changed or replaced, the emissions increase would be the allowable emissions of the emissions unit after the change or replacement minus the allowable emissions prior to the change or replacement. However, this may not be a negative value. If the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.
   - For each unpermitted emissions unit (i.e., a unit without any emissions limitations before the change) that is to be changed or replaced, the emissions increase would be the allowable emissions of the unit after the change or replacement minus the potential to emit prior to the change or replacement. However, this may not be a negative value. If the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.

☐ Modeling Analysis

Do I need to do a modeling analysis? Not needed per reasoning below

The Federal Minor New Source Review Regulations at 40 CFR 49.159(d) requires that a modeling analysis (AQIA) of proposed emissions be performed if there is reason to be concerned that new construction would cause or contribute to a National Ambient Air Quality Standard (NAAQS) or Prevention of Significant Deterioration (PSD) increment violation.

In addition, if the AQIA reveals that the new construction could cause or contribute to a NAAQS or PSD increment violation; such impacts must be reduced before a pre-construction permit can be issued.

To facilitate the protection of the NAAQS and PSD Increment, EPA requests that those proposed activities that meet the following criteria perform an AQIA:

1. The proposed activity has air emissions that the Reviewing Authority determines has the potential to cause adverse air quality effects for which an air quality impact analysis is necessary for an accurate assessment of the environmental impact of the activities proposed.

2. Modeling of proposed emissions is usually warranted, even though the proposed activity does not meet the modeling requirements, above, if it is reasonable to believe the new activity may cause or contribute to a violation of applicable ambient air quality standards or increments in circumstances such as:

(a) A substantial portion of the new or modified emissions have poor dispersion characteristics (e.g., rain caps, horizontal stacks, fugitive releases, or ***building downwash***) in close proximity to ***ambient air*** at the site boundary; None of these apply to the facility.

(b) The new or modified emissions are located in ***complex terrain*** (e.g., terrain above stack height in close proximity to the source); or The modified emissions are not located in complex terrain.

(c) The new or modified emissions are located in areas with existing air quality concerns. There are no existing air quality concerns in the surrounding area.

(d) If you have questions about whether modeling may be necessary based on the 4th criteria above, please contact the Reviewing Authority:

EPA Region 6
Bonnie Braganza
US EPA Region 6
Air Permits Section
Multimedia Permitting & Planning Division
Phone: 214-665-7340

What Kind of Air Quality Modeling Analysis Is Needed?

1. EPA considers a stepped or phased approach to modeling to be appropriate, as follows:

   Step 1: Qualitative Air Quality Assessment
   Step 2: Screening Analysis
   Step 3: Preliminary Modeling Analysis (refined modeling)
   Step 4: Full Impact Modeling Analysis (refined modeling)
   Step 5: PSD Increment and NAAQS Analysis
   Step 6: Additional Impact Analysis

2. Step 1: Qualitative Air Quality Assessment

   Narrative description of the current air quality conditions and the expected impact the permitted source would have on that air quality. Some suggested factors to consider in the qualitative discussion could include meteorology, terrain, distance to ambient air, expected emissions, etc. If a convincing case cannot be made qualitatively that no impacts to air quality would be expected, a screening analysis should next be performed.

3. Step 2: Screening Analysis **Not Applicable**

   For proposed new or modified sources that meet the modeling requirement criteria identified above, protection of air quality from proposed emissions may be shown by using a simple screening technique (e.g., SCREEN3 or AERSCREEN). Screening models are available for download at the EPA SCRAM website: http://www.epa.gov/ttn/scram/dispersion_screening.htm. A pre-approved modeling protocol is not necessary prior to conducting a Screening Analysis.

4. If the proposed new or modified emission increases do not increase ambient concentrations of a pollutant by more than the significant impact levels, as compared to the SILs identified below, no further modeling is necessary.

Significant Impact Levels

Pollutant	Averaging Period	Class II Area SIL (ug/m^3)	Class I Area SIL (ug/m^3)
SO_2	1 hr	3 ppb or 7.8 ug/m^3 (interim)	----
	3 hr	25	1.0
	24 hr	5	0.2
	Annual	1	0.08
$PM_{2.5}$	24 hr	0.07	1.2
	Annual	0.06	0.3
PM_{10}	24 hr	5	0.2
	Annual	1	0.08
NO_2	1 hr	4 ppb or 7.5 ug/m^3 (interim)	----
	Annual	1	0.08
CO	1 hr	2,000 ppb	
	8 hr	500 ppb	

Note: The Class I area SILs are provided as guidance and have not been formalized by EPA.

5. Sources that cannot demonstrate protection of air quality using a screening technique should continue to the modeling requirements in ***Step 2*** through ***Step 5***. Modeling in Steps 2 through 5 should be performed based an approved protocol.

6. Applicants are encouraged to contact the Reviewing Authority prior to conducting any refined modeling analysis (Step 2 through Step 5) to obtain an approved protocol.

What Should I Include In My Application If Modeling Is Necessary?

1. Approved Modeling Protocol **Not Applicable**

   In order to expedite the permitting process, it is recommended that you include a protocol that has already been approved. An application will not be deemed complete until the protocol has been approved.

2. Modeling Results

   In all cases, the modeling results should include the name of the model used, all input parameters, and the resulting output. Electronic copies of the modeling input/output files should be provided to the Reviewing Authority.

☒ **ESA** Endangered Species unaffected - see attached ESA printout for Sandoval County, NM (Page 45 / 46)

The Endangered Species Act requires us, in consultation with the U.S. Fish and Wildlife Service and/or the NOAA Fisheries Service, to ensure that actions we authorize are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species.

To expedite the approval of your proposed construction, we encourage you to identify any listed species that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you:

http://www.fws.gov/endangered/

Simply enter the State and County in which you propose to construct to obtain a general listing.

☒ **NHPA** None in Sandoval County, NM - see attached NHPA printout (Page 46 / 46)

The National Historic Preservation Act requires us, in consultation with State and/or Tribal Historic Preservation Officers to ensure that actions we authorize are not likely to affect cultural resources.

To expedite the approval of your proposed construction, we encourage you to identify any cultural resources that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you:

http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome

Simply enter the State and County in which you propose to construct to obtain a general listing.

C. ATTACHMENTS

Narrative description of the operations

This is a bulk loading facility. 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. This facility is located within the Santo Domingo Indian Reservation.

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
- A shearing mill that shears the polymer into the liquid asphalt
- 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 materials 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 wetting tank where the material is blended with liquid asphalt that is being pumped from a PMA storage tank. This mixture is fed into the polymer mill and then into a PMA storage tank for curing. The sulfur pellets are hand dumped into the sulfur bin and then transferred from the sulfur bin by an enclosed auger to the wetting tank where the material is blended with liquid asphalt that is being pumped from a PMA storage tank. This mixture is fed directly the PMA storage tank containing the cured polymer product for final processing.

Identification and description of all emission units and air pollution generating activities (with the exception of the exempt emissions units and activities listed in §49.153(c))

EPN	Source
10-01	Storage Tank
10-02	Storage Tank
10-03	Storage Tank
10-04	Storage Tank
30-01	Storage Tank
30-02	Storage Tank
30-03	Storage Tank
30-04	Storage Tank
HTR-1	Asphalt Heater
HTR-2	Asphalt Heater
BLR-3	Steam Boiler
LOAD	Asphalt Loading
F - 1	Process Fugitives
MILL	PMA Mill
T-LOAD	Two (2) Crude Oil Transloaders
F - 2	Crude Oil Transloading Fugitives

Identification and description of any existing air pollution control equipment and compliance monitoring devices or activities

EPN	Control Equipment
VBAL	Two (2) vapor balancing hoses leading from crude oil railcars to tanker trucks

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.

Type and amount of each fuel used

1. **Natural Gas**: 43,970.49 dekatherms in 2012

Type raw materials used

1. Liquid Petroleum Asphalt
2. Solid Polymer (Asphalt Additive)
3. Polyphosphoric Acid (Asphalt Additive)

Production Rates

Polymer Modified and Acid Modified Asphalts: 45,000 BBls/year (2012 production year)

Operating Schedules

This facility typically operates on a ten (10) hours per day, five (5) days per week schedule. The facility does not operate on federal and company holidays. However, the facility is capable of operating on a 24/7 schedule. As such, NuStar is **not** requesting an operating limitation below a full 24/7 operating schedule.

Any existing limitations on source operations affecting emissions or any work practice standards, where applicable, for all regulated NSR pollutants at your source.

None, N/A

Total allowable (potential to emit if there are no legally and practically enforceable restrictions) emissions from the air pollution source for the following air pollutants: particulate matter, PM10, PM2.5, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H2SO4), hydrogen sulfide (H2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

Please see the attached Potential-to-Emit calculations.

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 (3) 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

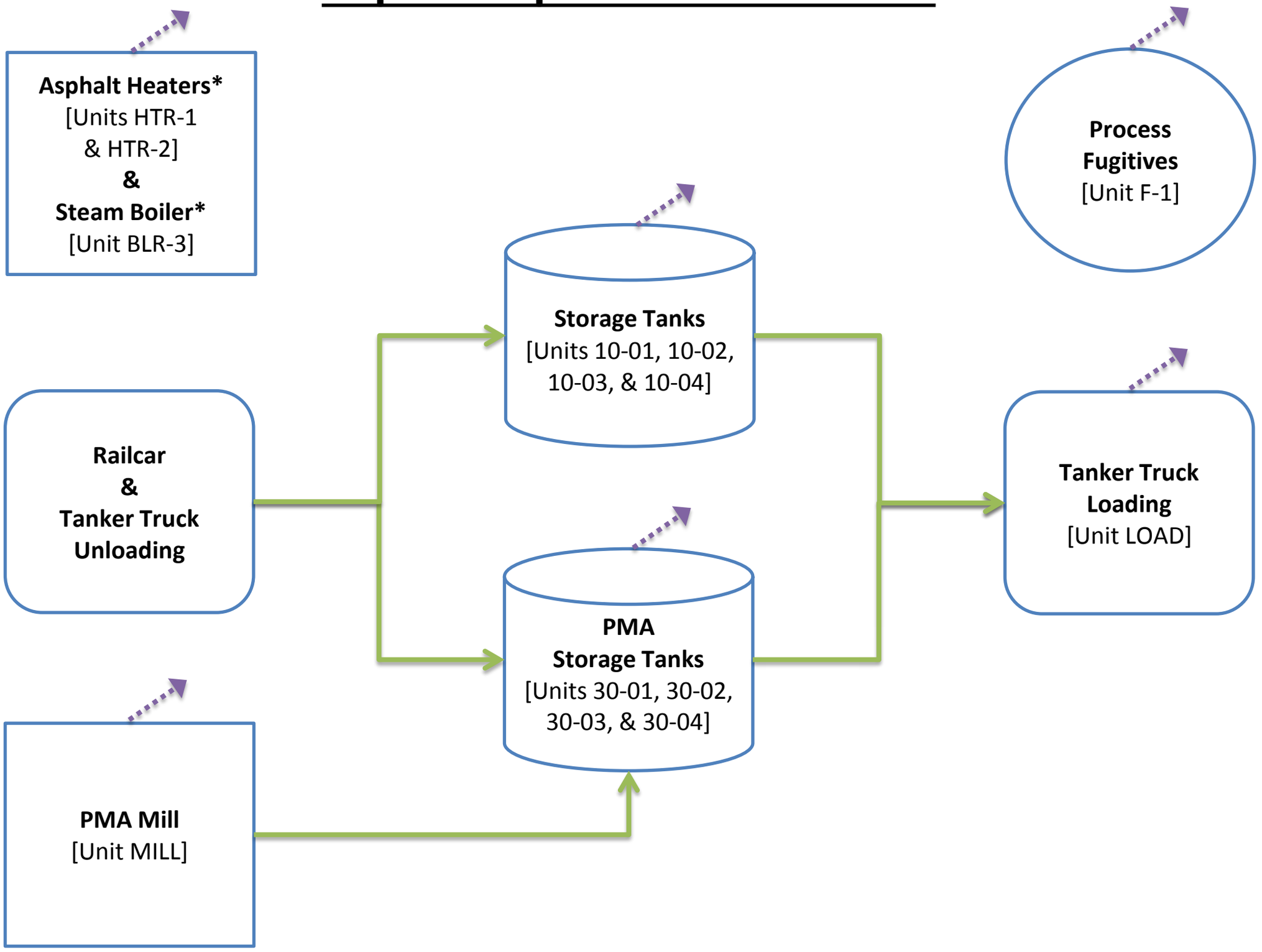
(4,809 barrels/day) * (365 days/year) = 1,755,285 barrels/year

The attached documentation includes complete potential-to-emit emissions calculations for the crude transloading operation. All calculations account for the historical, average, monthly ambient temperatures for nearby Albuquerque, NM.

Estimates of the total actual emissions from the air pollution source for the following air pollutants: particulate matter, PM10, PM2.5, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH3), fluorides (gaseous and particulate), sulfuric acid mist (H2SO4), hydrogen sulfide (H2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

Please see the attached actual emissions calculations for 2012. The new crude oil transloading operation only recently began operation, so the facility does not yet have actual emissions data for this operation. Only the asphalt offloading, storage, and loading operations are reflected in the 2012 actual emissions calculations. These calculations include boiler and fugitive emissions data.

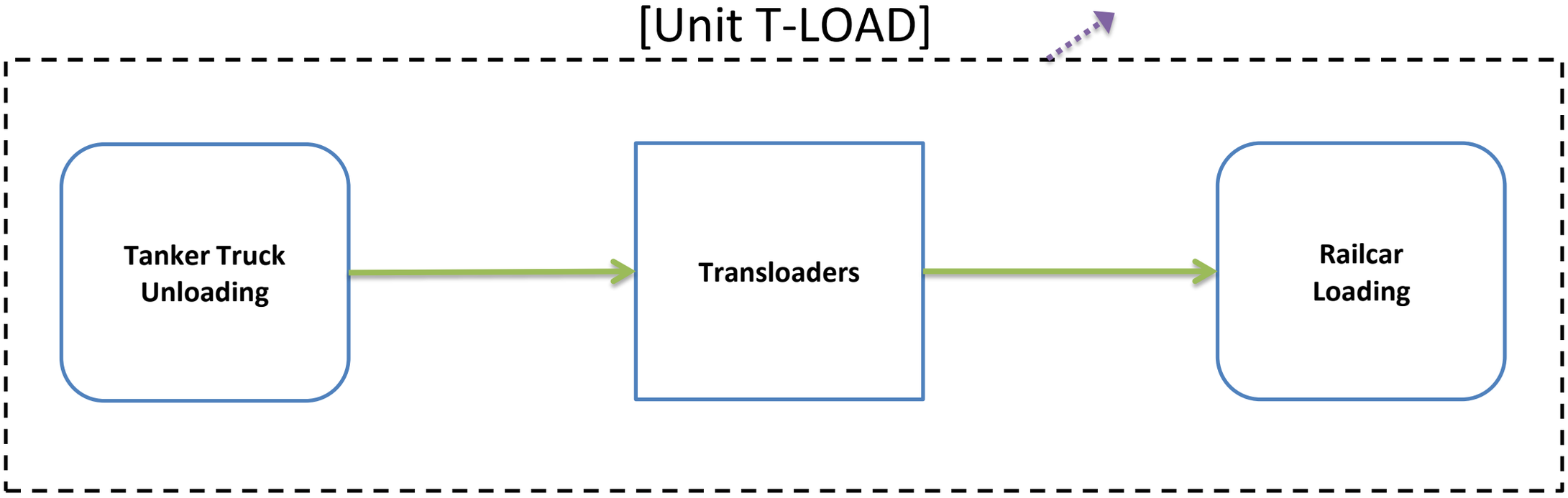
Asphalt Operation Overview



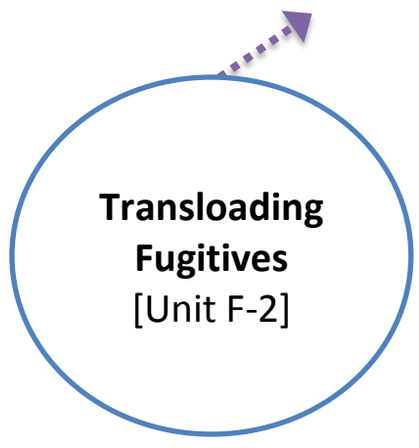
*** The boiler and heaters provide heat throughout the above process.**

Crude Oil Transloading*

[Unit T-LOAD]



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



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

Pollutant	Current Allowable Emissions (tpy)	Control Efficiency[1]	Post-Change Allowable Emissions (tpy)
PM	1.55	0%	1.55
PM_{10}	1.55	0%	1.55
$PM_{2.5}$	1.55	0%	1.55
SO_X	0.11	0%	0.11
NO_X	17.77	0%	17.77
CO	14.93	0%	14.93
VOC	129.62	40%[2]	78.51
PB	0.00	0%	0.00
FLUORIDES	0.00	0%	0.00
H_2SO_4	0.00	0%	0.00
H_2S	0.00	0%	0.00
TRS	0.00	0%	0.00
RSC	0.01	0%	0.01

[1] Refer to Page 22 / 47 of this application for the description of air pollution control equipment at this facility.

[2] VOC control efficiency only applies to the crude oil transloading operation [Unit TLOAD].

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	661.32	0.33	0.00	6.01	5.05	0.46	0.04	7214.40	0.14	0.13
HTR-2	Asphalt Heater	661.32	0.33	0.00	6.01	5.05	0.46	0.04	7214.40	0.14	0.13
BLR-3	Steam Boiler	632.50	0.32	0.00	5.75	4.83	0.44	0.04	6900.00	0.13	0.13
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			**129.62**	**0.00**	**17.77**	**14.93**	**1.55**	**0.11**	**21328.80**	**0.41**	**0.39**
								GWP[2]	1	25	298
								CO_{2e} TPY	**21328.80**	**10.20**	**116.52**

Total

21455.52

Calculation 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
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
HEATER EMISSIONS (ESTIMATED) - UNCONTROLLED EMISSIONS

[UNITS HTR-1, HTR-2] (Natural Gas Fired Thermal Fluid Heaters)

Burner Heat Input (MMBtu/hr):	**14**	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	120.24	12,024.00	6.01	N/A	N/A
CO	84	lb/MM SCF	100	1020	120.24	10,100.16	5.05	N/A	N/A
VOC	5.5	lb/MM SCF	100	1020	120.24	661.32	0.33	N/A	N/A
PM	7.6	lb/MM SCF	100	1020	120.24	913.82	0.46	N/A	N/A
SO_2	0.6	lb/MM SCF	100	1020	120.24	72.14	0.04	N/A	N/A
CO_2	120000	lb/MM SCF	100	1020	120.24	14,428,800.00	7214.40	1	7214.40
CH_4	2.3	lb/MM SCF	100	1020	120.24	276.55	0.14	25	3.45
N_2O	2.2	lb/MM SCF	100	1020	120.24	264.53	0.13	298	39.34
Total									**7257.19**

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):	**13.39**	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	115.00	11,500.00	5.75	N/A	N/A
CO	84	lb/MM SCF	100	1020	115.00	9,660.00	4.83	N/A	N/A
VOC	5.5	lb/MM SCF	100	1020	115.00	632.50	0.32	N/A	N/A
PM	7.6	lb/MM SCF	100	1020	115.00	874.00	0.44	N/A	N/A
SO_2	0.6	lb/MM SCF	100	1020	115.00	69.00	0.04	N/A	N/A
CO_2	120000	lb/MM SCF	100	1020	115.00	13,800,000.00	6900.00	1	6900.00
CH_4	2.3	lb/MM SCF	100	1020	115.00	264.50	0.13	25	3.30
N_2O	2.2	lb/MM SCF	100	1020	115.00	253.00	0.13	298	37.85
Total									**6941.15**

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

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]**

Crude Oil Transloading Operation
Fugitives [Unit F-2]

Formulas for calculating fugitive leak emissions from loading of petroleum liquid:

VOC Emissions (pounds/hour)= Emission Factor (pounds per hour per component) * Equipment Quantity * VOC Weight Fraction

HAP Emissions (pounds per hour) = Emissions Factor (pounds per hour per component) * Equipment Quantity * HAP Weight Fraction

Equipment Type	Equipment Quantity	Trucks per day	Emission Factor Light Oil (> 20 API Gravity)	VOC Weight Fraction	HAP Weight Fraction	Time Period to Load (hrs/truck)	VOC Emissions (lb/hr/truck)	Total VOC Emissions (lb/day)	Total VOC (tons/year)	HAP Emissions (lb/hr/truck)	Total HAP Emissions (lb/day)	Total HAP (tons/year)
Connectors	6	8	0.000463	0.2	0.1	0.33	0.0002	0.0015	0.0003	0.0001	0.0007	0.0001
Flanges	20	8	0.000243	0.2	0.1	0.33	0.0003	0.0026	0.0005	0.0002	0.0013	0.0002
Pumps	1	8	0.02866	0.2	0.1	0.33	0.0019	0.0151	0.0028	0.0009	0.0076	0.0014
Valves	2	8	0.0055	0.2	0.1	0.33	0.0007	0.0058	0.0011	0.0004	0.0029	0.0005
TOTALS							**0.0031**	**0.0250**	**0.0046**	**0.0016**	**0.0125**	**0.0023**
		24							X3			X3
		X3							**0.013672906** Tons			0.00683645 Tons
									27.34581168 lbs			13.6729058 lbs

Site Summary Report
Date Range: 01/01/2012 - 12/31/2012
Company Name: NuStar
Site:EC Rosario Asphalt

Pollutant Name	Pollutant Code	Actual Emissions (Tn/Yr)	Max PTE (Tn/Yr)
CARBON MONOXIDE	N/A	1.31	12.91
NITROGEN OXIDE (NO2)	N/A	2.34	18.49
SULFUR DIOXIDE	N/A	0.01	0.12
PM10	N/A	0.23	1.38
PM2.5	N/A	0	1.38
Total PM	N/A	0.23	1.53
Total VOC	N/A	0.47	1.61

Source Summary Report
Date Range: 01/01/2012 - 12/31/2012
Company Name: NuStar
Site:EC Rosario Asphalt

Source Name	Point Name	Pollutant Name	Actual TONS	Max PTE TONS	Delta TONS
10-01	10-01	ASPHALT	0.0037	0	0
		Total VOC:	0.0037	0.01	-0.0063
10-02	10-02	ASPHALT	0.0037	0	0
		Total VOC:	0.0037	0.01	-0.0063
10-03	10-03	ASPHALT	0.0035	0	0
		Total VOC:	0.0035	0.01	-0.0065
10-04	10-04	ASPHALT	0.0043	0	0
		Total VOC:	0.0043	0.01	-0.0057
30-01	30-01	ASPHALT	0.0093	0	0
		Total VOC:	0.0093	0.03	-0.0207
30-02	30-02	ASPHALT	0.0092	0	0
		Total VOC:	0.0092	0.03	-0.0208
30-03	30-03	ASPHALT	0.0095	0	0
		Total VOC:	0.0095	0.03	-0.0205
30-04	30-04	ASPHALT	0.0096	0	0
		Total VOC:	0.0096	0.03	-0.0204

Facility 2012 Emissions Data - Included to illustrate facility's actual annual emissions

Source Summary Report
Date Range: 01/01/2012 - 12/31/2012
Company Name: NuStar
Site:EC Rosario Asphalt

Source Name	Point Name	Pollutant Name	Actual TONS	Max PTE TONS	Delta TONS
AHS-1	AHS-1	CARBON MONOXIDE	0.30	5.05	-4.75
AHS-1	AHS-1	NITROGEN OXIDE (NO2)	0.35	6.01	-5.66
AHS-1	AHS-1	PM	0.03	0.46	-0.43
AHS-1	AHS-1	SULFUR DIOXIDE	0.00	0.04	-0.04
AHS-1	AHS-1	Total PM	0.03	0.46	-0.43
AHS-1	AHS-1	VOC - Undefined	0.02	0.33	-0.31
		Total VOC:	0.02	0.33	-0.31
AHS-2	ASH-2	CARBON MONOXIDE	0.30	5.05	-4.75
AHS-2	ASH-2	NITROGEN OXIDE (NO2)	0.35	6.01	-5.66
AHS-2	ASH-2	PM	0.03	0.46	-0.43
AHS-2	ASH-2	SULFUR DIOXIDE	0.00	0.04	-0.04
AHS-2	ASH-2	Total PM	0.03	0.46	-0.43
AHS-2	ASH-2	VOC - Undefined	0.02	0.33	-0.31
		Total VOC:	0.02	0.33	-0.31
BLR-3	BLR-3	CARBON MONOXIDE	0.71	2.81	-2.1
BLR-3	BLR-3	NITROGEN OXIDE (NO2)	1.64	6.47	-4.83
BLR-3	BLR-3	PM	0.12	0.46	-0.34
BLR-3	BLR-3	SULFUR DIOXIDE	0.01	0.05	-0.04
BLR-3	BLR-3	Total PM	0.12	0.46	-0.34
BLR-3	BLR-3	VOC - Undefined	0.12	0.46	-0.34
		Total VOC:	0.12	0.46	-0.34
F-1	F-1	ASPHALT	0.2553	0.2553	0
F-1	F-1	PM	0.05	0.15	-0.1
		Total VOC:	0.2553	0.2553	0
Load	LOAD	ASPHALT	0.0035	0	0
		Total VOC:	0.0035	0.07	-0.0665

Facility 2012 Emissions Data - Included to illustrate facility's actual annual emissions

Throughput Summary Report
Date Range: 01/1/2012 - 12/31/2012
(in bbls)

Site:EC Rosario Asphalt

Tank#	Stream	January 2012	February 2012	March 2012	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	Total
10-01	Asphalt - Gas	267	3,150.00	4,032.00	5,014.00	4,162.00	5,223.00	5,547.00	3,056.00	7,616.00	7,358.00	4,907.00	0	50,332.00
													Tank Total	**50,332.00**
10-02	Asphalt - Gas	0	3,113.00	1,531.00	2,969.00	1,735.00	0	10,966.00	8,121.00	3,591.00	13,912.00	2,935.00	1,641.00	50,514.00
													Tank Total	**50,514.00**
10-03	Asphalt - Gas	3,412.00	0	1,891.00	10,543.00	2,966.00	3,012.00	5,166.00	3,317.00	7,509.00	4,676.00	0	0	42,492.00
													Tank Total	**42,492.00**
10-04	Asphalt - Gas	0	0	3,371.00	4,691.00	11,604.00	8,288.00	9,114.00	24,094.00	5,220.00	13,824.00	3,785.00	0	83,991.00
													Tank Total	**83,991.00**
30-01	Asphalt - Gas	0	249	0	3,361.00	9,700.00	4,869.00	489	11,949.00	2,168.00	0	0	12,336.00	45,121.00
													Tank Total	**45,121.00**
30-02	Asphalt - Gas	2,431.00	0	2,420.00	5,007.00	6,126.00	6,431.00	3,409.00	12,238.00	1,886.00	746	273	0	40,967.00
													Tank Total	**40,967.00**
30-03	Asphalt - Gas	0	0	0	12,781.00	2,868.00	281	20,029.00	5,833.00	5,004.00	8,448.00	0	0	55,244.00
													Tank Total	**55,244.00**
30-04	Asphalt - Gas	0	0	0	0	2,884.00	5,915.00	0	3,378.00	12,208.00	9,767.00	12,203.00	14,580.00	60,935.00
													Tank Total	**60,935.00**
	Total	**6,110.00**	**6,512.00**	**13,245.00**	**44,366.00**	**42,045.00**	**34,019.00**	**54,720.00**	**71,986.00**	**45,202.00**	**58,731.00**	**24,103.00**	**28,557.00**	**429,596.00**

Loading Summary Report
Date Range: 01/1/2012 - 12/31/2012
Company
Site:EC
Rosario
Asphalt

Loading	Stream	January 2012	February 2012	March 2012	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012
Load	Asphalt - Vapor	7,499.00	9,104.00	7,940.00	9,880.00	21,049.00	16,037.00	22,530.00	20,878.00	14,437.00	32,418.00	18,222.00	4,244.00
													Loading Total
	Total	**7,499.00**	**9,104.00**	**7,940.00**	**9,880.00**	**21,049.00**	**16,037.00**	**22,530.00**	**20,878.00**	**14,437.00**	**32,418.00**	**18,222.00**	**4,244.00**

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 10-01 - RAT 10-01/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	0 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	0		
Diameter (ft):	42.5	**Effective Diameter (ft):**	42.5
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	420000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	56145.8369399 or 420,027.01
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	30145.7904091	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)

Pollutant Name	Molecular Weight	Heat Content Low	Heat Content High	Weight Percent	Vapor WT%
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
10-01	RAT 10-01/0601			100.00	No

Emissions Data:
Emission Point: 10-01 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	Code	DRE	Tons	Tons	Lb/Day	Lb/Hr
ASPHALT	0	0.0000	0.0002	0.0002	0.0000	0.0006
Total VOC	N/A	0.0000	0.0002	0.0002	0.0000	0.0006

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 10-02 - RAT 10-02/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	1641 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	1641		
Diameter (ft):	42.5	**Effective Diameter (ft):**	42.5
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	420000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	56145.8369399 or 420,027.01
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	30145.7904091	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)					
Pollutant Name	**Molecular Weight**	**Heat Content Low**	**Heat Content High**	**Weight Percent**	**Vapor WT%**
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
10-02	RAT 10-02/0601			100.00	No

Emissions Data:
Emission Point: 10-02 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	**Code**	**DRE**	**Tons**	**Tons**	**Lb/Day**	**Lb/Hr**
ASPHALT	0	0.0000	0.0003	0.0003	0.0000	0.0007
Total VOC	N/A	0.0000	0.0003	0.0003	0.0000	0.0007

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 10-03 - RAT 10-03/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	0 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	0		
Diameter (ft):	42.5	**Effective Diameter (ft):**	42.5
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	420000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	56145.8369399 or 420,027.01
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	30145.7904091	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)					
Pollutant Name	**Molecular Weight**	**Heat Content Low**	**Heat Content High**	**Weight Percent**	**Vapor WT%**
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
10-03	RAT 10-03/0601			100.00	No

Emissions Data:
Emission Point: 10-03 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	**Code**	**DRE**	**Tons**	**Tons**	**Lb/Day**	**Lb/Hr**
ASPHALT	0	0.0000	0.0002	0.0002	0.0000	0.0006
Total VOC	N/A	0.0000	0.0002	0.0002	0.0000	0.0006

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 10-04 - RAT 10-04/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	0 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	0		
Diameter (ft):	42.5	**Effective Diameter (ft):**	42.5
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	420000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	56145.8369399 or 420,027.01
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	30145.7904091	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)					
Pollutant Name	**Molecular Weight**	**Heat Content Low**	**Heat Content High**	**Weight Percent**	**Vapor WT%**
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
10-04	RAT 10-04/0601			100.00	No

Emissions Data:
Emission Point: 10-04 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	**Code**	**DRE**	**Tons**	**Tons**	**Lb/Day**	**Lb/Hr**
ASPHALT	0	0.0000	0.0002	0.0002	0.0000	0.0006
Total VOC	N/A	0.0000	0.0002	0.0002	0.0000	0.0006

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 30-01 - RAT 30-01/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	12336 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	12336		
Diameter (ft):	75	**Effective Diameter (ft):**	75
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	1260000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	168437.51082 or 1,260,081.02
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	93879.6241113	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)					
Pollutant Name	**Molecular Weight**	**Heat Content Low**	**Heat Content High**	**Weight Percent**	**Vapor WT%**
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
30-01	RAT 30-01/0601			100.00	No

Emissions Data:
Emission Point: 30-01 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	**Code**	**DRE**	**Tons**	**Tons**	**Lb/Day**	**Lb/Hr**
ASPHALT	0	0.0000	0.0009	0.0009	0.0000	0.0025
Total VOC	N/A	0.0000	0.0009	0.0009	0.0000	0.0025

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 30-02 - RAT 30-02/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	0 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	0		
Diameter (ft):	75	**Effective Diameter (ft):**	75
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	1260000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	168437.51082 or 1,260,081.02
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	93879.6241113	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)					
Pollutant Name	**Molecular Weight**	**Heat Content Low**	**Heat Content High**	**Weight Percent**	**Vapor WT%**
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
30-02	RAT 30-02/0601			100.00	No

Emissions Data:
Emission Point: 30-02 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	**Code**	**DRE**	**Tons**	**Tons**	**Lb/Day**	**Lb/Hr**
ASPHALT	0	0.0000	0.0007	0.0007	0.0000	0.0019
Total VOC	N/A	0.0000	0.0007	0.0007	0.0000	0.0019

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 30-03 - RAT 30-03/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	0 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	0		
Diameter (ft):	75	**Effective Diameter (ft):**	75
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	1260000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	168437.51082 or 1,260,081.02
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	93879.6241113	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)					
Pollutant Name	**Molecular Weight**	**Heat Content Low**	**Heat Content High**	**Weight Percent**	**Vapor WT%**
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
30-03	RAT 30-03/0601			100.00	No

Emissions Data:
Emission Point: 30-03 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	**Code**	**DRE**	**Tons**	**Tons**	**Lb/Day**	**Lb/Hr**
ASPHALT	0	0.0000	0.0007	0.0007	0.0000	0.0019
Total VOC	N/A	0.0000	0.0007	0.0007	0.0000	0.0019

Source Profile
Date Range: 12/01/2012 - 12/31/2012

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: 30-04 - RAT 30-04/0601 (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

	Source Base Value	Operational Data	Date Dependent
Operating Hours:	744		Yes
User Throughput:	14580 (BBls)		Yes
User Defined:	0 (N/A)		No
Days Online:	31		
Comment:	Fixed roof tank data from EPA Tanks program		

Throughput (BBLS):	14580		
Diameter (ft):	75	**Effective Diameter (ft):**	75
Cone Roof Slope (ft/ft):	0.11	**Dome Roof Radius (ft):**	0
Height (ft):	40	**Length (ft):**	0
Roof Height (ft):	3.75	**Liquid Height (ft):**	38
Max Liquid Height (ft):	38	**Max Liquid Volume (ft^3):**	1260000
Ave. Change Liquid Height Const Level Tank (ft):	20	**Tank Volume (ft^3): or Gal.**	168437.51082 or 1,260,081.02
Roof Outage (ft):	1.25	**Vapor Space Outage (ft):**	21.25
Total Solar Insolation (Btu/ft^2·day):	915.64122	**Paint Solar Absorptance (dimensionless):**	0.68
Roof Paint Solar Absorptance (dimensionless):	0.68	**Shell Paint Solar Absorptance (dimensionless):**	0.68
Vapor Space Volume (ft^3):	93879.6241113	**Daily Minimum Ambient Temperature (ºF):**	23.1
Daily Maximum Ambient Temperature (ºF):	47.5	**Daily Average Ambient Temperature Range (ºF):**	24.4
Daily Average Ambient Temperature (ºF):	35.3	**Liquid Bulk Temperature (ºF):**	300
Daily Average Liquid Surface Temperature (ºF):	300	**Daily Maximum Liquid Surface Temperature (ºF):**	350
Daily Minimum Liquid Surface Temperature (ºF):	270	**Daily Vapor Temperature Range (ºF):**	80
VP At Daily Average Liquid Surface Temperature (psia):	0.0002	**VP At Daily Maximum Liquid Surface Temperature (psia):**	0.0002
VP At Daily Minimum Liquid Surface Temperature (psia):	0.0002	**Atmospheric Pressure (psia):**	12.151
Breather Vent Pressure Set Range (psia):	0	**Vent Pressure Setting (psia):**	0
Vent Vacuum Setting (psia):	0	**Turnover Factor (dimensionless):**	1
Product Factor (dimensionless):	1	**Vapor Molecular Weight (lb/lb-mole):**	190
Vapor Density (lb/ft^3):	4.6614220443E-006	**Vapor Space Expansion Factor (dimensionless):**	0.105308884
Vented Vapor Saturation Factor (dimensionless):	0.999774800726	**Pumping Rate (gal/hr):**	0

Stream(s):

Stream:	Asphalt - Gas - Asphalt - Gas	**Sulfur Content:**	0.000000 N/A
High Heat Content:	0.00 N/A	**Density:**	8.3300 lb/gal
Low Heat Content:	0.00 N/A	**Molecular Weight:**	190.0000 lb/lb mol

Stream Weight Percent (User Defined)					
Pollutant Name	**Molecular Weight**	**Heat Content Low**	**Heat Content High**	**Weight Percent**	**Vapor WT%**
ASPHALT	190.0000	0.000 BTU/scf	0.000 BTU/lb	100.00000000	100.00000000

Equation Correlation(s):

AP-42 Vertical Fixed Roof Tank: ((operating_hours/ 24* (3.14/ 4* power(Diameter,2)* vapor_space_outage)* vapor_density* vapor_space_expansion_factor* vented_vapor_saturation_factor)+ 0.0010* vapor_molecular_weight* VP_At_Daily_Average_Liquid_Surface_Temperature* throughput_bbls* Turnover_Factor* product_factor)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Vertical Fixed Roof Tank

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
30-04	RAT 30-04/0601			100.00	No

Emissions Data:
Emission Point: 30-04 **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	**Code**	**DRE**	**Tons**	**Tons**	**Lb/Day**	**Lb/Hr**
ASPHALT	0	0.0000	0.0010	0.0010	0.0000	0.0027
Total VOC	N/A	0.0000	0.0010	0.0010	0.0000	0.0027

Source Profile
Date Range: 12/01/2014 - 12/31/2014

Company Name: NuStar
Site Name: EC Rosario Asphalt

Source: Rail Loading - 4 Corners - Rail Loading - 4 Corners (Primary)
Unit: Rosario Asphalt - Rosario Asphalt Terminal (N/A)
Operating Status: Active
Comment: N/A
Other Contributing Sources:

This operation began in late 2014, so a full 12 months of operational data is not presently available. This is a monthly emissions estimate based on the maximum product throughput.

Days Online: 10.87034375
Comment: N/A

Stream	Throughput	DD	Throughput Units	Operating Hours	DD	Saturation Factor	TVP (psia)	Molecular Weight	Temperature (°F)	Loading Loss Factor (lb/1000 Gal)
4 Corners Crude Oil	149079	Y	BBls	260.88825	Y	1	3.02	50	35.3	3.79862709469

DD is "Date Dependant"

Stream(s):

Stream: 4 Corners Crude Oil - 4 Corners Crude Oil
High Heat Content:
Low Heat Content:
Sulfur Content:
Density: lb/gal
Molecular Weight: lb/lb mol

Stream Weight Percent (User Defined)

Pollutant Name	Molecular Weight	Heat Content Low	Heat Content High	Weight Percent	Vapor WT%
2,2,4-TRIMETHYLPENTANE	114.2310	0.000 BTU/scf	0.000 BTU/lb	0.31040000	0.31040000
2-METHYLPENTANE	86.0600	0.000 BTU/scf	0.000 BTU/lb	1.99080000	1.99080000
BENZENE	78.1140	3591.000 BTU/scf	17272.000 BTU/lb	0.23300000	0.23300000
BUTANE (-N)	58.1230	3012.000 BTU/scf	19669.000 BTU/lb	0.81210000	0.81210000
BUTANE, 2,2-DIMETHYL-	86.1770	4360.000 BTU/scf	19175.000 BTU/lb	0.00040000	0.00040000
CARBON DIOXIDE	44.0100	0.000 BTU/scf	0.000 BTU/lb	0E-8	0E-8
CYCLOHEXANE	84.1610	4150.000 BTU/scf	18691.000 BTU/lb	2.36150000	2.36150000
CYCLOPENTANE	70.1340	0.000 BTU/scf	0.000 BTU/lb	0.00050000	0.00050000
CYCLOPENTANE, 1,1-DIMETHYL-	98.1880	0.000 BTU/scf	0.000 BTU/lb	0.55320000	0.55320000
DECANE (-N)	142.2850	0.000 BTU/scf	0.000 BTU/lb	6.85120000	6.85120000
DODECANE	170.3380	0.000 BTU/scf	0.000 BTU/lb	3.52590000	3.52590000
DOTRIACONTANE	450.8760	0.000 BTU/scf	0.000 BTU/lb	0.41720000	0.41720000
EICOSANE	282.5530	0.000 BTU/scf	0.000 BTU/lb	1.00840000	1.00840000
ETHANE	30.0700	1618.000 BTU/scf	20440.000 BTU/lb	0.00870000	0.00870000
ETHYLBENZENE	106.1670	0.000 BTU/scf	0.000 BTU/lb	0.94350000	0.94350000
HEPTADECANE	240.4730	0.000 BTU/scf	0.000 BTU/lb	1.54630000	1.54630000
HEPTANE (-N)	100.2040	5062.000 BTU/scf	19173.000 BTU/lb	3.55280000	3.55280000
HEXADECANE	226.4460	0.000 BTU/scf	0.000 BTU/lb	1.95530000	1.95530000
HEXANE, 2-METHYL-	100.2040	0.000 BTU/scf	0.000 BTU/lb	0.25250000	0.25250000
HEXANE, 3-METHYL-	100.2040	0.000 BTU/scf	0.000 BTU/lb	1.13850000	1.13850000
HYDROGEN SULFIDE	34.0820	588.000 BTU/scf	6540.000 BTU/lb	0E-8	0E-8
ISOBUTANE	58.1230	3002.000 BTU/scf	19606.000 BTU/lb	0.14780000	0.14780000
ISOPENTANE	72.1500	3678.000 BTU/scf	19349.000 BTU/lb	0.84850000	0.84850000
METHANE	16.0430	909.000 BTU/scf	21523.000 BTU/lb	0.00030000	0.00030000
METHYLCYCLOHEXANE	98.1880	0.000 BTU/scf	0.000 BTU/lb	4.37540000	4.37540000
METHYLCYCLOPENTANE	84.1610	0.000 BTU/scf	0.000 BTU/lb	2.13650000	2.13650000
N-HEXANE%	86.1770	4395.000 BTU/scf	19245.000 BTU/lb	2.45240000	2.45240000
NITROGEN	28.0140	0.000 BTU/scf	0.000 BTU/lb	0E-8	0E-8
NONADECANE	268.5270	0.000 BTU/scf	0.000 BTU/lb	0.62450000	0.62450000
NONANE (-N)	128.2580	0.000 BTU/scf	0.000 BTU/lb	5.75250000	5.75250000
O-XYLENE	106.1670	0.000 BTU/scf	0.000 BTU/lb	0.46870000	0.46870000
OCTACOSANE	394.7690	0.000 BTU/scf	0.000 BTU/lb	0.31370000	0.31370000
OCTADECANE	254.5000	0.000 BTU/scf	0.000 BTU/lb	1.53090000	1.53090000
OCTANE (-N)	114.2310	5753.000 BTU/scf	19114.000 BTU/lb	6.17950000	6.17950000
OXYGEN	31.9990	0.000 BTU/scf	0.000 BTU/lb	0E-8	0E-8
PENTADECANE	212.4190	0.000 BTU/scf	0.000 BTU/lb	2.72630000	2.72630000
PENTANE (-N)	72.1500	3678.000 BTU/scf	19349.000 BTU/lb	1.18720000	1.18720000
PENTANE, 3-METHYL-	86.1770	0.000 BTU/scf	0.000 BTU/lb	0.85720000	0.85720000
PROPANE	44.0970	2316.000 BTU/scf	19993.000 BTU/lb	0.19820000	0.19820000
TETRACOSANE	338.6610	0.000 BTU/scf	0.000 BTU/lb	0.48620000	0.48620000
TETRADECANE	198.3920	0.000 BTU/scf	0.000 BTU/lb	3.19460000	3.19460000
TOLUENE	92.1410	4233.000 BTU/scf	17438.000 BTU/lb	1.26290000	1.26290000
TRIDECANE	184.3650	0.000 BTU/scf	0.000 BTU/lb	3.61890000	3.61890000
UNDECANE	156.3120	0.000 BTU/scf	0.000 BTU/lb	4.57360000	4.57360000
VOC - Undefined	0.0000	0.000	0.000	28.36300000	28.36300000
XYLENE (MIXED ISOMERS)	106.1700	0.000 BTU/scf	0.000 BTU/lb	1.23900000	1.23900000

Equation Correlation(s):

AP-42 Loading Loss: Loading_Loss * (throughput* 42/ 1000)/ 2000

EF/Stack Test:	Pollutant Data	Emission Type	Re-Calc VP	Calc VWt%	Tons	P/D	P/H	Reporting Source	Route EPN	Route CIN	Apply DRE
	Stream	Normal	No	No	Yes	Yes	Yes				

Assumption/Notes for AP-42 Loading Loss

Source Relationships:

Emission Point	Emission Point Description	Control Device	Control Device Description	Percent Flow	Apply Control Device DRE
Rail Loading - 4 Corners	NA	4 Corners Vapor Return	4 Corners Truck-Rail Transload, Vapor Return to Truck	100.00	Yes

Emissions Data:
Emission Point: Rail Loading - 4 Corners **(From Primary)**

Pollutant			Uncontrolled	Controlled		
Name / Reporting Source	Code	DRE	Tons	Tons	Lb/Day	Lb/Hr
2,2,4-TRIMETHYLPENTANE	0	40.00000	0.03691	0.02215	0.00000	0.16979
2-METHYLPENTANE	0	40.00000	0.23675	0.14205	0.00000	1.08897
BENZENE	0	40.00000	0.02771	0.01663	0.00000	0.12745
BUTANE (-N)	0	40.00000	0.09658	0.05795	0.00000	0.44422

BUTANE, 2,2-DIMETHYL-	0	40.00000	0.00005	0.00003	0.00000	0.00022
CARBON DIOXIDE	0	40.00000	0.00000	0.00000	0.00000	0.00000
CYCLOHEXANE	0	40.00000	0.28083	0.16850	0.00000	1.29175
CYCLOPENTANE	0	40.00000	0.00006	0.00004	0.00000	0.00027
CYCLOPENTANE, 1,1-DIMETHYL-	0	40.00000	0.06579	0.03947	0.00000	0.30260
DECANE (-N)	0	40.00000	0.81476	0.48886	0.00000	3.74762
DODECANE	0	40.00000	0.41931	0.25158	0.00000	1.92868
DOTRIACONTANE	0	40.00000	0.04961	0.02977	0.00000	0.22821
EICOSANE	0	40.00000	0.11992	0.07195	0.00000	0.55160
ETHANE	0	40.00000	0.00103	0.00062	0.00000	0.00476
ETHYLBENZENE	0	40.00000	0.11220	0.06732	0.00000	0.51610
HEPTADECANE	0	40.00000	0.18389	0.11033	0.00000	0.84583
HEPTANE (-N)	0	40.00000	0.42251	0.25350	0.00000	1.94339
HEXADECANE	0	40.00000	0.23253	0.13952	0.00000	1.06955
HEXANE, 2-METHYL-	0	40.00000	0.03003	0.01802	0.00000	0.13812
HEXANE, 3-METHYL-	0	40.00000	0.13539	0.08124	0.00000	0.62276
HYDROGEN SULFIDE	0	40.00000	0.00000	0.00000	0.00000	0.00000
ISOBUTANE	0	40.00000	0.01758	0.01055	0.00000	0.08085
ISOPENTANE	0	40.00000	0.10091	0.06054	0.00000	0.46413
METHANE	0	40.00000	0.00004	0.00002	0.00000	0.00016
METHYLCYCLOHEXANE	0	40.00000	0.52033	0.31220	0.00000	2.39335
METHYLCYCLOPENTANE	0	40.00000	0.25408	0.15245	0.00000	1.16867
N-HEXANE%	0	40.00000	0.29164	0.17499	0.00000	1.34147
NITROGEN	0	40.00000	0.00000	0.00000	0.00000	0.00000
NONADECANE	0	40.00000	0.07427	0.04456	0.00000	0.34160
NONANE (-N)	0	40.00000	0.68410	0.41046	0.00000	3.14663
O-XYLENE	0	40.00000	0.05574	0.03344	0.00000	0.25638
OCTACOSANE	0	40.00000	0.03731	0.02238	0.00000	0.17159
OCTADECANE	0	40.00000	0.18206	0.10923	0.00000	0.83741
OCTANE (-N)	0	40.00000	0.73488	0.44093	0.00000	3.38020
OXYGEN	0	40.00000	0.00000	0.00000	0.00000	0.00000
PENTADECANE	0	40.00000	0.32422	0.19453	0.00000	1.49129
PENTANE (-N)	0	40.00000	0.14118	0.08471	0.00000	0.64940
PENTANE, 3-METHYL-	0	40.00000	0.10194	0.06116	0.00000	0.46889
PROPANE	0	40.00000	0.02357	0.01414	0.00000	0.10842
TETRACOSANE	0	40.00000	0.05782	0.03469	0.00000	0.26595
TETRADECANE	0	40.00000	0.37991	0.22795	0.00000	1.74745
TOLUENE	0	40.00000	0.15019	0.09011	0.00000	0.69081
Total VOC	N/A	40.00000	11.89217	7.13530	0.00000	54.70007
TRIDECANE	0	40.00000	0.43037	0.25822	0.00000	1.97955
UNDECANE	0	40.00000	0.54390	0.32634	0.00000	2.50177
VOC - Undefined	N/A	40.00000	3.37299	2.02379	0.00000	15.51463
XYLENE (MIXED ISOMERS)	0	40.00000	0.14734	0.08841	0.00000	0.67774

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Stage
Amphibians	Jemez Mountains salamander		Endangered	New Mexico Ecological Services		
Birds	Yellow-billed Cuckoo (Coccyzus	Western U.S. DPS	Threatened	Sacramento Fish And Wildlife		
Birds	Mexican spotted owl (Strix	Entire	Threatened	Arizona Ecological Services	Final Recovery Plan for the	Final Revision 1
Birds	Southwestern willow flycatcher	Entire	Endangered	Arizona Ecological Services	Final Recovery Plan for the	Final
Fishes	Rio Grande Silvery Minnow	Entire, except where listed as	Endangered	New Mexico Ecological Services	Rio Grande Silvery Minnow	Final Revision 1
Mammals	New Mexico meadow jumping		Endangered	New Mexico Ecological Services		

The facility has existed in its current form since the 1990s. This change is solely to request a Federally enforceable limit. The facility's operations are not changing as part of this permit application, so no change should affect the above endangered species.

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