

# ENVIROPROBE

INTEGRATED SOLUTIONS, INC.

DRILLING + ENGINEERING + ENVIRONMENTAL PROFESSIONALS



February 11, 2016

West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street, SE  
Charleston, West Virginia 25311

Re: Application for NSR Permit  
Tri-State Petroleum Bulk Plant #302  
98 South Main Street  
New Martinsville, WV 26155

Please find enclosed the NSR Permit Application for the Tri-State Petroleum Corporation Bulk Plant #302 located at 98 South Main Street, New Martinsville, WV 26155.

If you have any questions or comments, please feel free to contact me at (304) 776-6717.

Sincerely,

A handwritten signature in blue ink that reads "BCG II".

Benjamin C. Greene II  
Health and Safety Manager

Cc: Ed Coyne – Tri-State Petroleum Corporation

Enclosure

A yellow sticky note with handwritten text in blue ink. The text reads: "Tri-State Petroleum Corporation", "Bulk Plant #302", "103-00114", "R13-3298", and "John Legg".

Tri-State Petroleum  
Corporation  
Bulk Plant #302  
103-00114  
R13-3298  
John Legg

**APPLICATION FOR NSR PERMIT  
Tri-State Petroleum Bulk Plant 302  
98 South Main Street  
New Martinsville, WV 26155**

**EnviroProbe Project No: 15-0337-001**

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475  
[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

**APPLICATION FOR NSR PERMIT  
AND  
TITLE V PERMIT REVISION  
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION     MODIFICATION     RELOCATION  
 CLASS I ADMINISTRATIVE UPDATE     TEMPORARY  
 CLASS II ADMINISTRATIVE UPDATE     AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT     MINOR MODIFICATION  
 SIGNIFICANT MODIFICATION

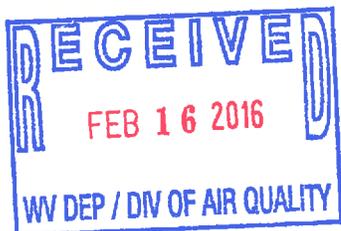
IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

**FOR TITLE V FACILITIES ONLY:** Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

**Section I. General**

1. Name of applicant (as registered with the WV Secretary of State's Office): <b>Tri-State Petroleum</b>		2. Federal Employer ID No. (FEIN): <b>55 0544468</b>	
3. Name of facility (if different from above): <b>Bulk Plant #302</b>		4. The applicant is the: <input checked="" type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input type="checkbox"/> BOTH	
5A. Applicant's mailing address: <b>2627 Vance Avenue Wheeling, WV 26003</b>		5B. Facility's present physical address: <b>98 South Main Street New Martinsville, WV 26155</b>	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <ul style="list-style-type: none"> <li>- If YES, provide a copy of the <b>Certificate of Incorporation/Organization/Limited Partnership</b> (one page) including any name change amendments or other Business Registration Certificate as <b>Attachment A</b>.</li> <li>- If NO, provide a copy of the <b>Certificate of Authority/Authority of L.L.C./Registration</b> (one page) including any name change amendments or other Business Certificate as <b>Attachment A</b>.</li> </ul>			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <ul style="list-style-type: none"> <li>- If YES, please explain:    <b>Applicant is the owner</b></li> <li>- If NO, you are not eligible for a permit for this source.</li> </ul>			
9. Type of plant or facility (stationary source) to be <b>constructed, modified, relocated, administratively updated or temporarily permitted</b> (e.g., coal preparation plant, primary crusher, etc.): <b>Facility is a bulk fuel storage transfer facility</b>		10. North American Industry Classification System (NAICS) code for the facility: <b>424710</b>	
11A. DAQ Plant ID No. (for existing facilities only): <b>N/A</b>		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): <b>N/A</b>	

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.



12A.		
<ul style="list-style-type: none"> <li>For <b>Modifications, Administrative Updates</b> or <b>Temporary permits</b> at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road;</li> <li>For <b>Construction</b> or <b>Relocation permits</b>, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a <b>MAP</b> as <b>Attachment B</b>. <b>Attachment B - Not Applicable</b></li> </ul> <p>From the intersection of State Route 2 and State Route 7 proceed approximately .10 mile north and turn left on Harlan Drive. Travel approximately .50 miles on Harlan Drive to the intersection of Harlan Drive and Main Street where site is located.</p>		
12.B. New site address (if applicable): <b>Not Applicable</b>	12C. Nearest city or town: <b>New Martinsville</b>	12D. County: <b>Wetzel</b>
12.E. UTM Northing (KM): <b>4387612.431</b>	12F. UTM Easting (KM): <b>511445.238</b>	12G. UTM Zone: <b>17 N</b>
13. Briefly describe the proposed change(s) at the facility: <b>New permit</b>		
14A. Provide the date of anticipated installation or change: <b>03/01/2016</b> <ul style="list-style-type: none"> <li>If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen:     /     /</li> </ul>		14B. Date of anticipated Start-Up if a permit is granted: <b>03/01/2016</b>
14C. Provide a <b>Schedule</b> of the planned <b>Installation of/Change</b> to and <b>Start-Up</b> of each of the units proposed in this permit application as <b>Attachment C</b> (if more than one unit is involved). <b>Not Applicable</b>		
15. Provide maximum projected <b>Operating Schedule</b> of activity/activities outlined in this application: <b>Hours Per Day 8      Days Per Week 5      Weeks Per Year 52</b>		
16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
17. <b>Risk Management Plans.</b> If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see <a href="http://www.epa.gov/ceppo">www.epa.gov/ceppo</a> ), submit your <b>Risk Management Plan (RMP)</b> to U. S. EPA Region III.		
18. <b>Regulatory Discussion.</b> List all Federal and State air pollution control regulations that you believe are applicable to the proposed process ( <i>if known</i> ). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance ( <i>if known</i> ). Provide this information as <b>Attachment D</b> .		
<b>Section II. Additional attachments and supporting documents.</b>		
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate <b>application fee</b> (per 45CSR22 and 45CSR13).		
20. Include a <b>Table of Contents</b> as the first page of your application package.		
21. Provide a <b>Plot Plan</b> , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as <b>Attachment E</b> (Refer to <b>Plot Plan Guidance</b> ) . <ul style="list-style-type: none"> <li>Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).</li> </ul>		
22. Provide a <b>Detailed Process Flow Diagram(s)</b> showing each proposed or modified emissions unit, emission point and control device as <b>Attachment F</b> .		
23. Provide a <b>Process Description</b> as <b>Attachment G</b> . <ul style="list-style-type: none"> <li>Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).</li> </ul>		
<b>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</b>		

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.  
 – For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input checked="" type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input checked="" type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below: **Not Applicable**

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

YES       NO

➤ If YES, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's **"Precautionary Notice – Claims of Confidentiality"** guidance found in the **General Instructions** as **Attachment Q**.

**Section III. Certification of Information**

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

*All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.*

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

**Certification of Truth, Accuracy, and Completeness**

I, the undersigned  Responsible Official /  Authorized Representative, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

**Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE BCA DATE: 2/11/16  
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: <u>Benjamin C Greenett</u>		35C. Title: <u>Health &amp; Safety Manager</u>
35D. E-mail: <u>bcgreene@envirophinc.com</u>	36E. Phone: <u>(304) 776-6717</u>	36F. FAX: <u>(304) 776-6769</u>
36A. Printed name of contact person (if different from above): <u>Dana Elkus</u>		36B. Title: <u>Sr. Geologist</u>
36C. E-mail: <u>daellkuse@envirophinc.com</u>	36D. Phone: <u>(304) 776-6717</u>	36E. FAX: <u>(304) 776-6769</u>

**PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:**

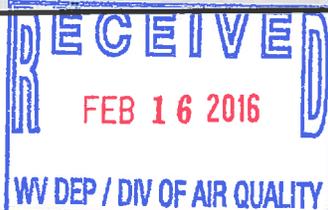
- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate               | <input checked="" type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input type="checkbox"/> Attachment B: Map(s)  | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s)          |
| <input type="checkbox"/> Attachment C: Installation and Start Up Schedule            | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s)            |
| <input type="checkbox"/> Attachment D: Regulatory Discussion                         | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations     |
| <input checked="" type="checkbox"/> Attachment E: Plot Plan                          | <input type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s)   | <input checked="" type="checkbox"/> Attachment P: Public Notice                         |
| <input checked="" type="checkbox"/> Attachment G: Process Description                | <input type="checkbox"/> Attachment Q: Business Confidential Claims                     |
| <input checked="" type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms                                  |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table               | <input type="checkbox"/> Attachment S: Title V Permit Revision Information              |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee                                     |

*Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.*

**FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:**

- Forward 1 copy of the application to the Title V Permitting Group and:
- For Title V Administrative Amendments:
  - NSR permit writer should notify Title V permit writer of draft permit,
- For Title V Minor Modifications:
  - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
  - NSR permit writer should notify Title V permit writer of draft permit.
- For Title V Significant Modifications processed in parallel with NSR Permit revision:
  - NSR permit writer should notify a Title V permit writer of draft permit,
  - Public notice should reference both 45CSR13 and Title V permits,
  - EPA has 45 day review period of a draft permit.

*All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.*



ATTACHMENT A  
BUSINESS CERTIFICATION



December 15, 2015

Mr. Benjamin Greene II  
Enviroprobe Integrated Solutions, Inc.  
630 Cross Lanes Drive  
Nitro, WV 25143

RE: Project 15-0322  
NSR Permit  
Bulk Plant 302  
New Martinsville, WV

Dear Benjamin:

Thank you in advance for working on project number 15-0322 requesting permit from West Virginia DAQ NSR. You are an authorized representative to sign the permit on Tri-State's behalf.

Enclosed please find the approved estimate, as well as our certificate of Incorporation.

Sincerely,

A handwritten signature in blue ink, appearing to read "Edward J. Coyne II", is written over the typed name.

Edward J. Coyne II  
COO

EJC/bjk

Enclosures (3)

**Request for Taxpayer  
 Identification Number and Certification**

Give Form to the requester. Do not send to the IRS.

Name (as shown on your income tax return)  
Tri-State Petroleum Corp.

Business name/disregarded entity name, if different from above

Check appropriate box for federal tax classification:  
 Individual/sole proprietor     C Corporation     S Corporation     Partnership     Trust/estate

Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ \_\_\_\_\_

Other (see instructions) ▶ \_\_\_\_\_

Address (number, street, and apt. or suite no.)  
2627 Vance Ave

City, state, and ZIP code  
Wheeling WV 26003

List account number(s) here (optional)

Requester's name and address (optional)

Print or type  
See Specific instructions on page 2.

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I Instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

**Social security number**

			-			-				
--	--	--	---	--	--	---	--	--	--	--

**Employer identification number**

5	5	-	0	5	4	4	6	8
---	---	---	---	---	---	---	---	---

**Note.** If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below).

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the Instructions on page 4.

**Sign Here**    Signature of U.S. person ▶ EMJ Green, COO    Date ▶ 11/11/15

**General Instructions**

Section references are to the Internal Revenue Code unless otherwise noted.

**Purpose of Form**

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

**Note.** If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.



## Certificate

*I, Natalie E. Tennant, Secretary of State of the  
State of West Virginia, hereby certify that*

**TRI-STATE PETROLEUM CORPORATION**

was incorporated under the laws of West Virginia and a Certificate of Incorporation was issued by the West Virginia Secretary of State's Office on April 19, 1974.

I further certify that the corporation has not been revoked by the State of West Virginia nor has the West Virginia Secretary of State issued a Certificate of Dissolution to the corporation.

Accordingly, I hereby issue this

## CERTIFICATE OF EXISTENCE

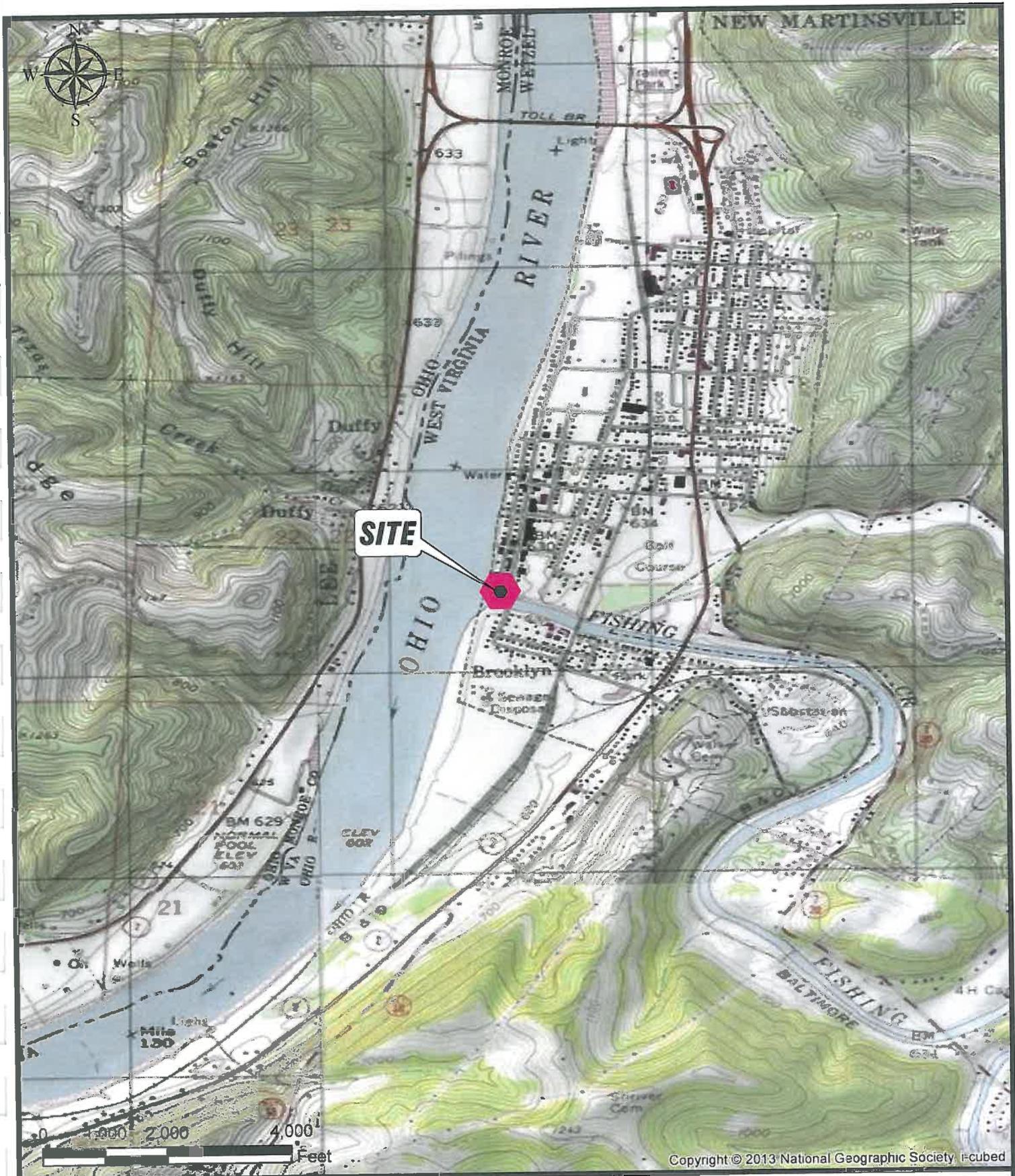
Validation ID:4WV3E\_S2PM3



*Given under my hand and the  
Great Seal of the State of  
West Virginia on this day of  
December 14, 2015*

*Natalie E. Tennant*

Secretary of State



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# ENVIROPROBE

**INTEGRATED SOLUTIONS, INC.**  
 DRILLING ENGINEERING ENVIRONMENTAL PROFESSIONALS  
 630 CROSS LANES DRIVE (304) 776-6717 OFFICE  
 NITRO, WEST VIRGINIA, 25143 (304) 776-6789 FAX

SCALE: 1" = 2000'  
 DATE: 02/06/2016  
 PROJECT NO.: 15-0322  
 \\Epsarv\gis\Projects\2015 Projects\15-0322  
 Tri State Petroleum\Map Documents\  
 FIGURE 1 DAQ GENERAL PERMIT SITE & LOCATION MAP.mxd

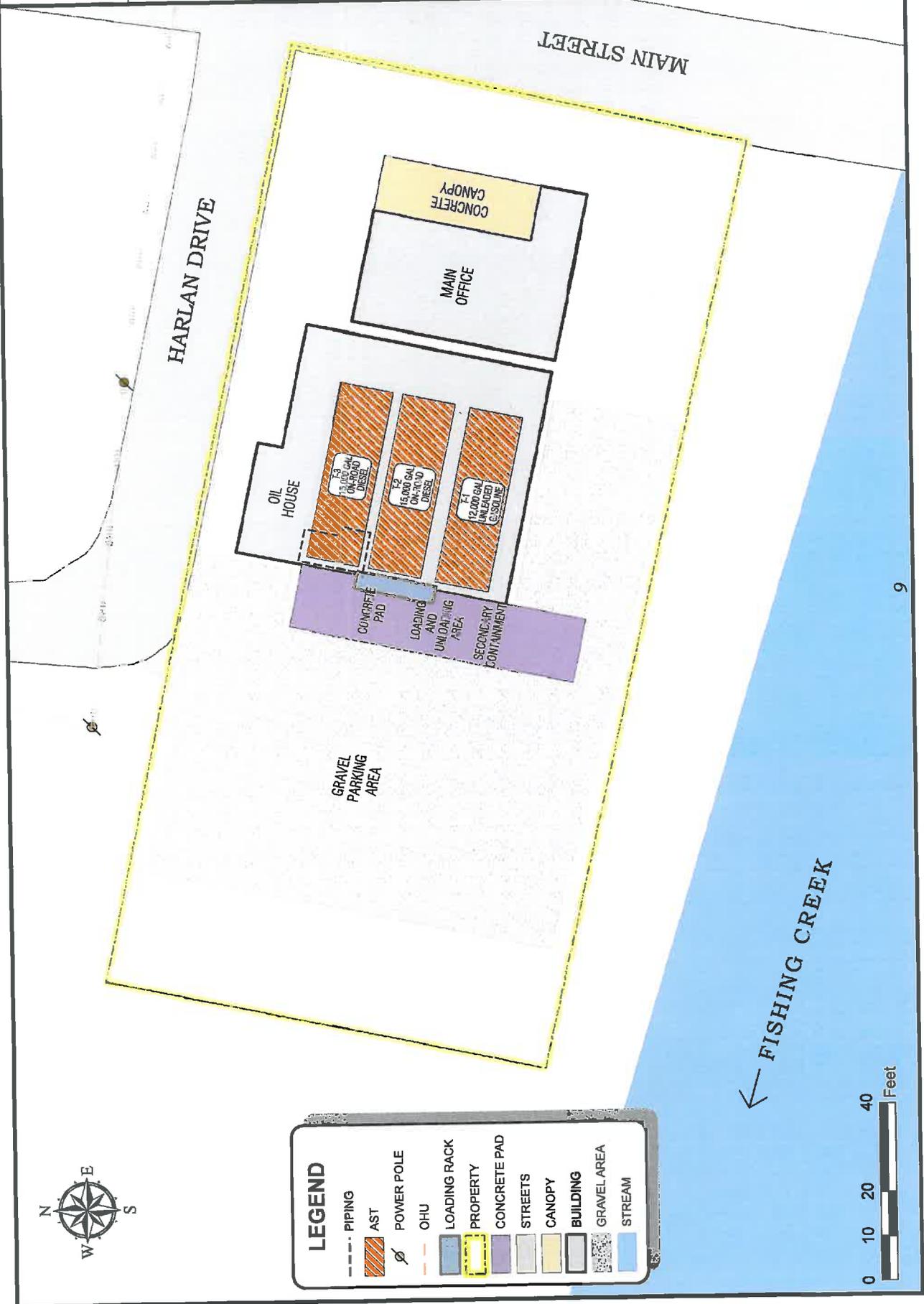
**ATTACHMENT E-1 - SITE LOCATION MAP**  
**WV DAQ GENERAL PERMIT**  
**TRI-STATE PETROLEUM**  
**98 SOUTH MAIN STREET**  
**NEW MARTINSVILLE, WV 26155**

ATTACHMENT E-2 - PLOT PLAN  
WV DAQ GENERAL PERMIT  
TRI-STATE PETROLEUM  
98 SOUTH MAIN STREET  
NEW MARTINSVILLE, WV 26155

Client  
TRI-STATE PETROLEUM  
2627 VANCE AVENUE  
WHEELING, WV 26003

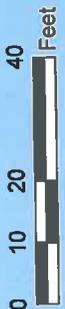
ENVIROPROBE  
INTEGRATED SOLUTIONS, INC.  
SHELLY C. KILGUS, P.E., PROJECT MANAGER  
5800 S. LAYNE DRIVE  
SHELBYVILLE, KY 40165  
(502) 776-0292

Scale: 1" = 20'  
Date: 02/04/2016  
Project No.: 15-0322  
Checked: BEG  
Approved:  
Drawn: DAE  
Map Location: PROJECT 15-0322 PERMITS-0222 In State Permitted  
Map Location: PROJECT 15-0322 PERMITS-0222 In State Permitted

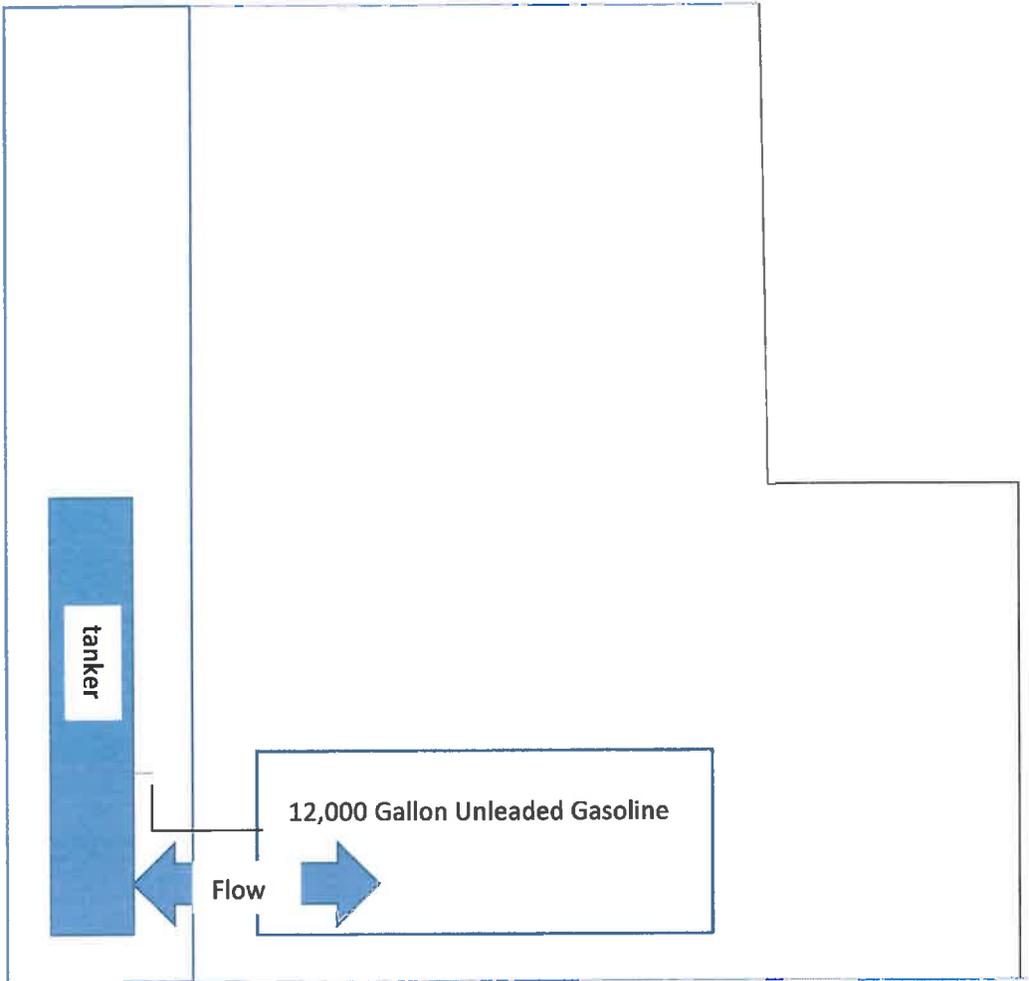


**LEGEND**

---	PIPING
▨	AST
⊗	POWER POLE
---	OHU
▨	LOADING RACK
▨	PROPERTY
▨	CONCRETE PAD
▨	STREETS
▨	CANOPY
▨	BUILDING
▨	GRAVEL AREA
▨	STREAM



**ATTACHMENT F  
PROCESS FLOW DIAGRAM**



**ATTACHMENT G  
PROCESS DESCRIPTION**

Raw product off loading and storage =Raw product such as gasoline is off loaded from tanker trucks into the bulk tanks at the facility

Raw product loading into tankers \_Raw product such as gasoline is loaded into tanker trucks into the bulk tank sat the facility for offsite distribution



# SAFETY DATA SHEET

SDS ID NO.: 0127MAR019  
Revision Date: 05/14/2015

## 1. IDENTIFICATION

**Product Name:** Marathon Petroleum Regular Unleaded Gasoline

**Synonym:** Conventional Regular Unleaded Gasoline  
**Chemical Family:** Complex Hydrocarbon Substance

**Recommended Use:** Fuel.  
**Use Restrictions:** All others.

**Supplier Name and Address:**  
**MARATHON PETROLEUM COMPANY LP**  
**539 South Main Street**  
**Findlay, OH 45840**

**SDS information:** 1-419-421-3070

**Emergency Telephone:** 1-877-627-5463

## 2. HAZARD IDENTIFICATION

### Classification

#### OSHA Regulatory Status

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 1
Skin corrosion/irritation	Category 2
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

**Hazards Not Otherwise Classified (HNOC)**  
Static accumulating flammable liquid

### Label elements

### EMERGENCY OVERVIEW

#### Danger

**EXTREMELY FLAMMABLE LIQUID AND VAPOR**  
May accumulate electrostatic charge and ignite or explode

May be fatal if swallowed and enters airways  
Causes skin irritation  
May cause genetic defects  
May cause cancer  
Suspected of damaging fertility or the unborn child  
May cause respiratory irritation  
May cause drowsiness or dizziness  
Toxic to aquatic life with long lasting effects



**Appearance** Clear or Colored Liquid

**Physical State** Liquid

**Odor** Strong Hydrocarbon

**Precautionary Statements - Prevention**

Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not eat, drink or smoke when using this product  
Do not breathe the mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wash hands thoroughly after handling  
Avoid release to the environment

**Precautionary Statements - Response**

IF exposed or concerned: Get medical attention  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
If skin irritation occurs: Get medical attention  
Wash contaminated clothing before reuse  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor if you feel unwell  
IF SWALLOWED: Immediately call a POISON CENTER or doctor  
Do NOT induce vomiting  
In case of fire: Use water spray, fog or regular foam for extinction

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Keep cool  
Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container at an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Gasoline is a complex combination of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons having molecular chains ranging in length from four to ten carbons. May contain small amounts of dye and other additives (>0.02%) which are not considered hazardous at the concentrations used.

**Composition Information:**

Name	CAS Number	Weight %
Gasoline	86290-81-5	100
Toluene	108-88-3	1-15
Xylene (mixed isomers)	1330-20-7	2-10
1,2,4-Trimethylbenzene	95-63-6	1-5
Benzene	71-43-2	0.5-3.5
n-Hexane	110-54-3	0-3
Ethylbenzene	100-41-4	0.5-2.0
Naphthalene	91-20-3	0.1-0.5

**4. FIRST AID MEASURES**

**First Aid Measures**

**General advice**

In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

**Inhalation:**

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

**Skin Contact:**

Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. May be absorbed through the skin in harmful amounts. Get medical attention if irritation persists. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties. Destroy contaminated, non-chemical resistant footwear.

**Eye Contact:**

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

**Ingestion:**

Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

**Most important signs and symptoms, both short-term and delayed with overexposure**

**Adverse Effects:**

Acute: Headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue.  
Delayed: Dry skin and possible irritation with repeated or prolonged exposure.

**Indication of any immediate medical attention and special treatment needed**

**NOTES TO PHYSICIAN:**

**INHALATION:** This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

**SKIN:** Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be **SERIOUS SURGICAL EMERGENCIES**.

**INGESTION:** This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media**

For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

**Unsuitable extinguishing media**

Do not use straight water streams to avoid spreading fire.

**Specific hazards arising from the chemical**

This product has been determined to be an extremely flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

**Hazardous combustion products**

Smoke, carbon monoxide, and other products of incomplete combustion.

**Explosion data**

**Sensitivity to Mechanical Impact No.**  
**Sensitivity to Static Discharge Yes.**

**Special protective equipment and precautions for firefighters**

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.

**NFPA:** Health 1 Flammability 3 Instability 0 Special Hazards -

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.

**Protective Equipment:** Use personal protection measures as recommended in Section 8.

**Emergency Procedures:** Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

**Environmental precautions:** Avoid release to the environment. Avoid subsoil penetration.

**Methods and materials for containment:**

Contain liquid with sand or soil.

**Methods and materials for cleaning up:**

Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools.

**7. HANDLING AND STORAGE**

**Safe Handling Precautions:**

NEVER SIPHON THIS PRODUCT BY MOUTH. Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Use only non-sparking tools. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition of vapors or mists without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

Portable containers should never be filled while in or on a motor vehicle or marine craft. Containers should be placed on the ground. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers.

A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling.

Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES (See First Aid Section 4).

**Storage Conditions:**

Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area.

**Incompatible materials**

Strong oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Gasoline 86290-81-5	300 ppm TWA 500 ppm STEL	-	300 ppm TWA 900 mg/m <sup>3</sup> TWA 500 ppm STEL 1500 mg/m <sup>3</sup> STEL	-
Toluene 108-88-3	20 ppm TWA	TWA: 200 ppm Ceiling: 300 ppm	100 ppm TWA 375 mg/m <sup>3</sup> TWA 150 ppm STEL 560 mg/m <sup>3</sup> STEL	500 ppm
Xylene (mixed isomers) 1330-20-7	100 ppm TWA 150 ppm STEL	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>	100 ppm TWA 435 mg/m <sup>3</sup> TWA 150 ppm STEL 655 mg/m <sup>3</sup> STEL	900 ppm
1,2,4-Trimethylbenzene 95-63-6	25 ppm TWA	-	25 ppm TWA 125 mg/m <sup>3</sup> TWA	-
Benzene 71-43-2	0.5 ppm TWA 2.5 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028) TWA: 1 ppm STEL: 5 ppm (see 29 CFR 1910.1028)	25 ppm Ceiling 1 ppm TWA 5 ppm STEL	500 ppm
n-Hexane 110-54-3	50 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 500 ppm TWA: 1800 mg/m <sup>3</sup>	50 ppm TWA 180 mg/m <sup>3</sup> TWA	1100 ppm
Ethylbenzene 100-41-4	20 ppm TWA	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>	100 ppm TWA 435 mg/m <sup>3</sup> TWA 125 ppm STEL 545 mg/m <sup>3</sup> STEL	800 ppm
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>	10 ppm TWA 50 mg/m <sup>3</sup> TWA 15 ppm STEL 75 mg/m <sup>3</sup> STEL	250 ppm

**Notes:** The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

**Engineering measures:** Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

#### **Personal protective equipment**

**Eye protection:** Use goggles or face-shield if the potential for splashing exists.

**Skin and body protection:** Use nitrile rubber, viton or PVA gloves for repeated or prolonged skin exposure. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

**Respiratory protection:** Approved organic vapor chemical cartridge or supplied air respirators should be worn for exposures to any components exceeding the established exposure limits. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### **Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear or Colored Liquid
<b>Color</b>	Clear or Colored
<b>Odor</b>	Strong Hydrocarbon
<b>Odor Threshold</b>	No available data.
<b><u>Property</u></b>	<b><u>Values (Method)</u></b>
<b>Melting Point / Freezing Point</b>	No available data.
<b>Initial Boiling Point / Boiling Range</b>	32-225 °C / 90-437 °F
<b>Flash Point</b>	-45.5 °C / -50 °F
<b>Evaporation Rate</b>	No available data.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammability Limit in Air (%)</b>	
Upper Flammability Limit:	7.6
Lower Flammability Limit:	1.4
<b>Vapor Pressure</b>	403-776 mm Hg@ 100°F
<b>Vapor Density</b>	3-4
<b>Specific Gravity / Relative Density</b>	0.70-0.77
<b>Water Solubility</b>	Negligible
<b>Solubility in other solvents</b>	No available data.
<b>Partition Coefficient</b>	2.13-4.5
<b>Decomposition temperature:</b>	No available data.
<b>pH:</b>	Not applicable
<b>Autoignition Temperature</b>	C.A. 257 °C / 495 °F
<b>Kinematic Viscosity</b>	No available data.
<b>Dynamic Viscosity</b>	No available data.
<b>Explosive Properties</b>	No available data.
<b>Softening Point</b>	No available data.
<b>VOC Content (%)</b>	100%
<b>Density</b>	5.9-6.3 lbs/gal
<b>Bulk Density</b>	Not applicable.

## 10. STABILITY AND REACTIVITY

<b><u>Reactivity</u></b>	The product is non-reactive under normal conditions.
<b><u>Chemical stability</u></b>	The material is stable at 70°F, 760 mmHg pressure.
<b><u>Possibility of hazardous reactions</u></b>	None under normal processing.
<b><u>Hazardous polymerization</u></b>	Will not occur.
<b><u>Conditions to avoid</u></b>	Excessive heat, sources of ignition, open flame.
<b><u>Incompatible materials</u></b>	Strong oxidizing agents.
<b><u>Hazardous decomposition products</u></b>	None known under normal conditions of use.

## 11. TOXICOLOGICAL INFORMATION

**Potential short-term adverse effects from overexposures**

<b>Inhalation</b>	Irritating to the respiratory system. May cause drowsiness or dizziness. Breathing high concentrations of this material in a confined space or by intentional abuse can cause irregular heartbeats which can cause death.
<b>Eye contact</b>	Causes mild eye irritation.

**Skin contact**

Causes skin irritation. Effects may become more serious with repeated or prolonged contact. May be absorbed through the skin in harmful amounts.

**Ingestion**

May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, throat and gastrointestinal tract.

**Acute Toxicological data**

Name	Oral LD50	Dermal LD50	Inhalation LC50
Gasoline 86290-81-5	14000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
Toluene 108-88-3	> 2000 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h
Xylene (mixed isomers) 1330-20-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.04 mg/L (Rat) 4 h
1,2,4-Trimethylbenzene 95-63-6	3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	18,000 mg/m <sup>3</sup> (Rat) 4 h
Benzene 71-43-2	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 20 mg/l (Rat) 4 h
n-Hexane 110-54-3	15000 mg/kg (Rat)	3000 mg/kg (Rabbit)	48000 ppm (Rat) 4 h
Ethylbenzene 100-41-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h
Naphthalene 91-20-3	490 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 340 mg/m <sup>3</sup> (Rat) 1 h

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**BENZENE:** Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer and other diseases of the blood forming organs including Acute Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a case control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC. The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma.

**NAPHTHAS:** In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30-year latency period. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffer's Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

**ISOPARAFFINS:** Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

**TOLUENE:** Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Abuse of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system, and can cause CNS depression, cardiac arrhythmias, and death. Studies of workers indicate longterm exposure may be related to impaired color vision and hearing. Some studies of workers suggest longterm exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest longterm exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals have been largely negative. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposure may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Adverse effects on the liver, kidney, thymus and nervous system were observed in animal

studies following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

**ETHYLBENZENE:** Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). The incidence of tumors was also elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure with evidence of maternal toxicity. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals have demonstrated evidence of ototoxicity (hearing loss) following exposure levels as low as 300 ppm for 5 days. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

**XYLENES, ALL ISOMERS:** Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, nervous system damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross overexposure. Effects from Prolonged or Repeated Exposure: Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure with evidence of maternal toxicity. The relevance of these observations to humans is not clear at this time. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

**C9 AROMATIC HYDROCARBONS:** A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm.

**NAPHTHALENE:** Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

**N-HEXANE:** Long-term or repeated exposure to n-hexane can cause peripheral nerve

damage. Initial symptoms are numbness of the fingers and toes. Also, motor weakness can occur in the digits, but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. Testicular atrophy and partial to full loss of the germ cell line were observed in sub-chronic high-dose inhalation studies of laboratory rodents. These effects appeared irreversible. Rodent reproduction studies have shown evidence of reduced fetal weight but no frank malformations.

PENTANES: Studies of pentane isomers in laboratory animals indicate exposure to extremely high levels (roughly 10 vol.%) may induce cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

CARBON MONOXIDE: is a chemical asphyxiant with no warning properties (such as odor). At 400-500 ppm for 1 hour headache and dyspnea may occur. If activity is increased, symptoms of overexposure may include nausea, irritability, increased respiration, tinnitus, sweating, chest pain, confusion, impaired judgement, dizziness, weakness, drowsiness, ataxia, irregular heart beat, cyanosis and pallor. Levels in excess of 1000 ppm can result in collapse, loss of consciousness, respiratory failure and death. Extremely high concentrations (12,800 ppm) can cause immediate unconsciousness and death in 1-3 minutes. Repeated anoxia can lead to central nervous system damage and peripheral neuropathy, with loss of sensation in the fingers, amnesia, and mental deterioration and possible congestive heart failure. Damage may also occur to the fetus, lung, liver, kidney, spleen, cardiovascular system and other organs.

COMBUSTION ENGINE EXHAUST: Chronic inhalation studies of gasoline engine exhaust in mice, rats and hamsters did not produce any carcinogenic effects. Condensates/extracts of gasoline engine exhaust produced an increase in tumors compared to controls when testing by skin painting, subcutaneous injection, intratracheal instillation or implantation into the lungs.

**Adverse effects related to the physical, chemical and toxicological characteristics**

**Signs & Symptoms** Nausea, vomiting, signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue.

**Sensitization** Not expected to be a skin or respiratory sensitizer.

**Mutagenic effects** May cause genetic defects.

**Carcinogenicity** Cancer designations are listed in the table below.

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Gasoline 86290-81-5	Confirmed animal carcinogen (A3)	Possibly Carcinogenic (2B)	Not Listed	Not Listed
Toluene 108-88-3	Not Classifiable (A4)	Not Classifiable (3)	Not Listed	Not Listed
Xylene (mixed isomers) 1330-20-7	Not Classifiable (A4)	Not Classifiable (3)	Not Listed	Not Listed
1,2,4-Trimethylbenzene 95-63-6	Not Listed	Not Listed	Not Listed	Not Listed
Benzene 71-43-2	Confirmed human carcinogen (A1)	Carcinogenic to humans (1)	Known to be human carcinogen	Known carcinogen
n-Hexane 110-54-3	Not Listed	Not Listed	Not Listed	Not Listed
Ethylbenzene 100-41-4	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Specific Target Organ Toxicity (STOT) - single exposure** Respiratory system. Central nervous system.

**Specific Target Organ Toxicity (STOT) - repeated exposure** Not classified.

**Aspiration hazard** May be fatal if swallowed or vomited and enters airways.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Gasoline 86290-81-5	72-hr EC50 = 56 mg/l Algae	96-hr LC50 = 11 mg/l Rainbow trout (static)	-	48-hr LC50 = 7.6 mg/l Daphnia magna
Toluene 108-88-3	72-hr EC50 = 12.5 mg/l Algae	96-hr LC50 ≤ 10 mg/l Rainbow trout	-	48-hr EC50 = 5.46-9.83 mg/l Daphnia magna 48-hr EC50 = 11.5 mg/l Daphnia magna (Static)
Xylene (mixed isomers) 1330-20-7	72-hr EC50 = 11 mg/l Algae	96-hr LC50 = 8 mg/l Rainbow trout	-	48-hr LC50 = 3.82 mg/l Daphnia magna
1,2,4-Trimethylbenzene 95-63-6	-	96-hr LC50 = 7.19-8.28 mg/l Fathead minnow (flow-through)	-	48-hr EC50 = 6.14 mg/L Daphnia magna
Benzene 71-43-2	72-hr EC50 = 29 mg/l Algae	96-hr LC50 = 5.3 mg/l Rainbow trout (flow-through)	-	48-hr EC50 = 8.76-15.6 mg/l Daphnia magna (Static)
n-Hexane 110-54-3	-	96-hr LC50 = 2.5 mg/l Fathead minnow	-	-
Ethylbenzene 100-41-4	72-hr EC50 = 1.7-7.6 mg/l Algae	96-hr LC50 = 4 mg/L Rainbow trout	-	48-hr EC50 = 1-4 mg/L Daphnia magna
Naphthalene 91-20-3	-	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	-	48-hr LC50 = 1.6 mg/l Daphnia magna

**Persistence and degradability** Expected to be inherently biodegradable.

**Bioaccumulation** Has the potential to bioaccumulate.

**Mobility in soil** May partition into air, soil and water.

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Description of Waste Residues**  
This material may be a flammable liquid waste.

**Safe Handling of Wastes**  
Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

**Disposal of Wastes / Methods of Disposal**  
The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

**Methods of Contaminated Packaging Disposal**

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

**14. TRANSPORT INFORMATION**

**DOT (49 CFR 172.101):**

UN Proper shipping name: Gasoline  
 UN/identification No: UN 1203  
 Transport Hazard Class(es): 3  
 Packing group: II

**TDG (Canada):**

UN Proper shipping name: Gasoline  
 UN/identification No: UN 1203  
 Transport Hazard Class(es): 3  
 Packing group: II

**15. REGULATORY INFORMATION**

**US Federal Regulatory Information:**

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

**EPA Superfund Amendment & Reauthorization Act (SARA):**

**SARA Section 302:** This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Gasoline	NA
Toluene	NA
Xylene (mixed isomers)	NA
1,2,4-Trimethylbenzene	NA
Benzene	NA
n-Hexane	NA
Ethylbenzene	NA
Naphthalene	NA

**SARA Section 304:** This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Gasoline	NA
Toluene	1000 lb final RQ 454 kg final RQ
Xylene (mixed isomers)	100 lb final RQ 45.4 kg final RQ
1,2,4-Trimethylbenzene	NA
Benzene	10 lb final RQ 4.54 kg final RQ
n-Hexane	5000 lb final RQ 2270 kg final RQ
Ethylbenzene	1000 lb final RQ 454 kg final RQ

Naphthalene	100 lb final RQ 45.4 kg final RQ
-------------	-------------------------------------

**SARA:** The following EPA hazard categories apply to this product:

- Acute Health Hazard
- Chronic Health Hazard
- Fire Hazard

**SARA Section 313:** This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Gasoline	None
Toluene	1.0 % de minimis concentration
Xylene (mixed isomers)	1.0 % de minimis concentration
1,2,4-Trimethylbenzene	None
Benzene	0.1 % de minimis concentration
n-Hexane	1.0 % de minimis concentration
Ethylbenzene	0.1 % de minimis concentration
Naphthalene	0.1 % de minimis concentration

**State and Community Right-To-Know Regulations:**

The following component(s) of this material are identified on the regulatory lists below:

**Gasoline**

- Louisiana Right-To-Know: Not Listed.
- California Proposition 65: Not Listed.
- New Jersey Right-To-Know: SN 0957
- Pennsylvania Right-To-Know: Present
- Massachusetts Right-To Know: Present
- Florida Substance List: Not Listed.
- Rhode Island Right-To-Know: Not Listed.
- Michigan Critical Materials Register List: Not Listed.
- Massachusetts Extraordinarily Hazardous Substances: Not Listed.
- California - Regulated Carcinogens: Not Listed.
- Pennsylvania RTK - Special Hazardous Substances: Not Listed.
- New Jersey - Special Hazardous Substances: Carcinogen; Flammable - third degree
- New Jersey - Environmental Hazardous Substances List: SN 0957 TPQ: 10000 lb (Under N.J.A.C. 7:1G, environmental hazardous substances in mixtures such as gasoline or new and used petroleum oil may be reported under these categories)
- Illinois - Toxic Air Contaminants: Present
- New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed.

**Toluene**

- Louisiana Right-To-Know: Not Listed.
- California Proposition 65: Developmental toxicity, initial date 1/1/91  
Female reproductive toxicity, initial date 8/7/09
- New Jersey Right-To-Know: SN 1866
- Pennsylvania Right-To-Know: Environmental hazard
- Massachusetts Right-To Know: Present
- Florida Substance List: Not Listed.
- Rhode Island Right-To-Know: Toxic (skin); Flammable (skin)
- Michigan Critical Materials Register List: 100 lb Annual usage threshold
- Massachusetts Extraordinarily Hazardous Substances: Not Listed.
- California - Regulated Carcinogens: Not Listed.
- Pennsylvania RTK - Special Hazardous Substances: Not Listed.
- New Jersey - Special Hazardous Substances: Flammable - third degree; Teratogen

New Jersey - Environmental Hazardous Substances List:	SN 1866 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
<b>Xylene (mixed isomers)</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 2014
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To-Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold all isomers
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 2014 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
<b>1,2,4-Trimethylbenzene</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 1929
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To-Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Not Listed.
New Jersey - Environmental Hazardous Substances List:	Not Listed.
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.
<b>Benzene</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Carcinogen, initial date 2/27/87 Developmental toxicity, initial date 12/26/97 Male reproductive toxicity, initial date 12/26/97
New Jersey Right-To-Know:	SN 0197
Pennsylvania Right-To-Know:	Environmental hazard; Special hazardous substance
Massachusetts Right-To-Know:	Carcinogen; Extraordinarily hazardous
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin); Carcinogen (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Carcinogen; Extraordinarily hazardous
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Present
New Jersey - Special Hazardous Substances:	Carcinogen; Flammable - third degree; Mutagen
New Jersey - Environmental Hazardous Substances List:	SN 0197 TPQ: 500 lb

Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	10 lb RQ (air); 1 lb RQ (land/water)
<b>n-Hexane</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 1340
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 1340 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1 lb RQ (air); 1 lb RQ (land/water)
<b>Ethylbenzene</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Carcinogen, initial date 6/11/04
New Jersey Right-To-Know:	SN 0851
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Carcinogen; flammable - Third degree
New Jersey - Environmental Hazardous Substances List:	SN 0851 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
<b>Naphthalene</b>	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	SN 1322 SN 3758
Pennsylvania Right-To-Know:	Environmental hazard Present (particulate)
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Carcinogen
New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%)
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	100 lb RQ (air); 1 lb RQ (land/water)

**Canada DSL/NDSL Inventory:** This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

**Canadian Regulatory Information:** "This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations."

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Gasoline	B2,D2A,D2B	0.1%
Toluene	B2,D2A,D2B	0.1%
Xylene (mixed isomers)	B2,D2A,D2B	m-, o-isomers 1.0%; p-isomer 0.1%
1,2,4-Trimethylbenzene	B3	1
Benzene	B2,D2A,D2B	0.1%
n-Hexane	B2,D2A,D2B	1%
Ethylbenzene	B2,D2A,D2B	0.1%
Naphthalene	B4,D2A	0.1%



**NOTE:** Not Applicable.

**16. OTHER INFORMATION**

**Prepared By:** Toxicology and Product Safety  
**Revision Date:** 05/14/2015

**Revision Note:**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



**Attachment J  
EMISSION POINTS DATA SUMMARY SHEET**

**Table 1: Emissions Data**

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type <sup>1</sup>	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS <sup>3</sup> (Speciate VOCs & HAPs)	Maximum Potential Uncontrolled Emissions <sup>4</sup>		Maximum Potential Controlled Emissions <sup>5</sup>		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used <sup>6</sup>	Emission Concentration <sup>7</sup> (ppmv or mg/m <sup>4</sup> )
		ID No.	Source	ID No.	Device Type	Short Term <sup>2</sup>	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			

**NO EMISSIONS  
CONTROLS PRESENT  
NOT APPLICABLE**

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

- Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.
- Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).
- List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. **DO NOT LIST** H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.
- Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).
- Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m<sup>3</sup>) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO<sub>2</sub>, use units of ppmv (See 45CSR10).



## Attachment K

### FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS	
1.) Will there be haul road activities?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."	

FUGITIVE EMISSIONS SUMMARY		All Regulated Pollutants' Chemical Name/CAS <sup>1</sup>	Maximum Potential Uncontrolled Emissions <sup>2</sup>		Maximum Potential Controlled Emissions <sup>3</sup>		Est. Method Used <sup>4</sup>
			lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads							
Unpaved Haul Roads							
Storage Pile Emissions							
Loading/Unloading Operations		Benzene	0.0042	0.0183			EE
Wastewater Treatment Evaporation & Operations							
Equipment Leaks			Does not apply			Does not apply	
General Clean-up VOC Emissions							
Other							

<sup>1</sup> List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. DO NOT LIST H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.

<sup>2</sup> Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>3</sup> Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>4</sup> Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

**Attachment L  
EMISSIONS UNIT DATA SHEET  
BULK LIQUID TRANSFER OPERATIONS**

Furnish the following information for each new or modified bulk liquid transfer area or loading rack, as shown on the *Equipment List Form* and other parts of this application. This form is to be used for bulk liquid transfer operations such as to and from drums, marine vessels, rail tank cars, and tank trucks.

Identification Number (as assigned on <i>Equipment List Form</i> ): <span style="float: right;">T1</span>				
1. Loading Area Name: <span style="float: right;">Truck Loading Area</span>				
2. Type of cargo vessels accommodated at this rack or transfer point (check as many as apply): <input type="checkbox"/> Drums <input type="checkbox"/> Marine Vessels <input type="checkbox"/> Rail Tank Cars <input checked="" type="checkbox"/> Tank Trucks				
3. Loading Rack or Transfer Point Data:				
Number of pumps				
Number of liquids loaded		1		
Maximum number of marine vessels, tank trucks, tank cars, and/or drums loading at one time		1		
4. Does ballasting of marine vessels occur at this loading area? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Does not apply				
5. Describe cleaning location, compounds and procedure for cargo vessels using this transfer point: <p style="text-align: center;">Not Applicable</p>				
6. Are cargo vessels pressure tested for leaks at this or any other location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, describe: <span style="float: right;">Not Applicable</span>				
7. Projected Maximum Operating Schedule (for rack or transfer point as a whole):				
Maximum	Jan. - Mar.	Apr. - June	July - Sept.	Oct. - Dec.
hours/day				
days/week				

weeks/quarter				
---------------	--	--	--	--

**8. Bulk Liquid Data (add pages as necessary):**

Pump ID No.					
Liquid Name					
Max. daily throughput (1000 gal/day)					
Max. annual throughput (1000 gal/yr)					
Loading Method <sup>1</sup>					
Max. Fill Rate (gal/min)					
Average Fill Time (min/loading)					
Max. Bulk Liquid Temperature (°F)					
True Vapor Pressure <sup>2</sup>					
Cargo Vessel Condition <sup>3</sup>					
Control Equipment or Method <sup>4</sup>					
Minimum control efficiency (%)					
Maximum Emission Rate	Loading (lb/hr)				
	Annual (lb/yr)				
Estimation Method <sup>5</sup>					
<sup>1</sup> BF = Bottom Fill    SP = Splash Fill    SUB = Submerged Fill					
<sup>2</sup> At maximum bulk liquid temperature					
<sup>3</sup> B = Ballasted Vessel, C = Cleaned, U = Uncleaned (dedicated service), O = other (describe)					
<sup>4</sup> List as many as apply (complete and submit appropriate <i>Air Pollution Control Device Sheets</i> ): CA = Carbon Adsorption    LOA = Lean Oil Adsorption CO = Condensation    SC = Scrubber (Absorption)    CRA = Compressor-Refrigeration-Absorption    TO = Thermal Oxidation or Incineration CRC = Compression-Refrigeration-Condensation    VB = Dedicated Vapor Balance (closed system) O = other (describe)					
<sup>5</sup> EPA = EPA Emission Factor as stated in AP-42 MB = Material Balance					

TM = Test Measurement based upon test data submittal  
 O = other (describe)

**9. Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

<p><b>MONITORING</b></p> <p style="text-align: center;">No proposed monitoring</p>	<p><b>RECORDKEEPING</b></p> <p style="text-align: center;">No proposed recordkeeping</p>
<p><b>REPORTING</b></p> <p style="text-align: center;">No proposed reporting</p>	<p><b>TESTING</b></p> <p style="text-align: center;">No proposed testing</p>

**MONITORING.** PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE. *Not Applicable*

**RECORDKEEPING.** PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING. *Not Applicable*

**REPORTING.** PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

**TESTING.** PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE. *Not Applicable*

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

## Attachment L-1 Emissions Calculations - Loading Loss

Tri-State Petroleum (Bulk Plant 302) Emissions from Loading Gasoline Trucks		
Annual Throughput	<b>107,625 gallons</b> 407,361 Liters	Key $L_L = 12.46 * S * P * M / T$ from AP-42 Section 5.2 $L_L$ = Loading Losses (lb/1000 gal) S = Saturation Factor (Table 5.2.1) P = True Vapor Pressure (psi) M = molecular weight of vapors (lb/lb-mol) T = Temperature (°R)
Calculate Emission Factor $L_L$	$L_L = 12.46 * S * P * M / T$ S = 1 P = 6.3711 M = 62 lb/lb-mol T = 516.32 R $L_L =$	
	<b>9.53 lb/1000 gal</b>	
Calculate Uncontrolled Gasoline Annual Loading Losses	$\text{Uncontrolled Loss} = \text{Annual Throughput (gal)} / 1000 * L_L$ Uncontrolled Loss = 1,026 lb/yr Uncontrolled Loss = <b>0.51 TPY</b>	
Calculated Controlled Gasoline Annual Loading Losses	Permitted loss 35 mg/L loaded Actual Annual Loss After Control = 31 lb/yr Actual Loss After Control = <b>0.02 TPY</b>	
Calculated Controlled Gasoline Hourly Loading Losses	Permitted loss 35 mg/L loaded Assume 6 trucks loaded in one hour = 42,000 gal loaded/hr 158,970 L loaded/hr Actual Hourly Loss After Control = <b>12.27 lb/hr</b>	



## Attachment L-2

# LOADING INSTRUCTIONS FOR 302 BULK PLANT NEW MARTINSVILLE, WV

1. Position truck in spot to load the product desired:
  - White Tank 1 - Unleaded Loading Arm
  - Yellow Tank 2 - Clear ULSD Loading Arm
  - Green Tank 3 - DYED Diesel Loading Arm
2. Connect ground strap to truck.
3. Record gauge reading from the top of the gauge indicator before loading.
4. Open valve at base of tank.
5. Open dome lid without slamming it, check to make sure pocket is empty of product. If it is not make sure that it is the same product being loaded. If it is not load another pocket or unload that pocket into another pocket on truck or back into storage tank.
6. Insert loading arm into pocket being loaded. No more than 6" from bottom of compartment.
7. Pull open loading handles:
  - To Start Flow – Grab & Hold Dead Man Switch
8. Watch product as you are loading as to not over fill the pocket.
  - To Stop Flow – Release Dead Man Switch
9. NEVER block open loading handle.
10. Load each pocket until you have loaded what is needed to do your deliveries on this trip.
11. Close valve at base of tank.
12. Let loading arm drain into pocket.
13. REMOVE arm from truck and retract into rest position.
14. Close dome lid and latch shut.
15. Record ending gauge reading.
16. Disconnect grounding cable.
17. If you need to load another product reposition truck and start over with step 2 to step 18.
18. When completed loading stand behind truck and make sure everything has been disconnected.
19. Get in truck and pull truck to the front of the building.
20. Go back to loading area and make sure everything is closed and locked then close and lock gate.
21. Go into office and record stick readings and gallons loaded on transportation log for inventory and transportation tracking purposes.
22. Lock up office when leaving.
23. Call 800-541-3835 x150 with any questions or problems.



## **Attachment L-3 UNLOADING INSTRUCTIONS FOR 302 BULK PLANT NEW MARTINSVILLE, WV**

White – Unleaded Gasoline – Tank 1  
Yellow – Low Sulfur Diesel – Tank 2  
Green – High Sulfur Diesel – Tank 3

1. Position trailer to offload.
2. Connect ground strap to trailer.
3. Check visual tank gauge and make sure delivery gallons will not overfill tank. Record your beginning tank reading.
4. Press overfill alarm to test light and siren are operational.
5. Connect hose to proper colored unloading pipe using Dry Break Adaptor out of locked container. Unload dyed fuel last if you have a split load.
6. Unload all product and disconnect hose and put Dry Break Adaptor back in lockable container.
7. Disconnect grounding strap.
8. Record your finished gauge reading.
9. Pull up out of plant and secure gate if no TSPC personnel on site.
10. Call 800-541-3835 x150 with any questions or problems.

**Attachment L**  
**EMISSIONS UNIT DATA SHEET**  
**STORAGE TANKS**

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA'S TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT [www.epa.gov/tnn/tanks.html](http://www.epa.gov/tnn/tanks.html)), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA'S AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (<http://www.epa.gov/tnn/chiefl/>).

**I. GENERAL INFORMATION (required)**

1. Bulk Storage Area Name <b>AST AREA</b>	2. Tank Name <b>GASOLINE AST (T1)</b>
3. Tank Equipment Identification No. (as assigned on <i>Equipment List Form</i> ) <b>WV Tank ID: 052-00000571</b>	4. Emission Point Identification No. (as assigned on <i>Equipment List Form</i> )
5. Date of Commencement of Construction (for existing tanks) <b>November 2015</b>	
6. Type of change <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> New Stored Material <input type="checkbox"/> Other Tank Modification	
7. Description of Tank Modification (if applicable)	
7A. Does the tank have more than one mode of operation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (e.g. Is there more than one product stored in the tank?)	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.): <b>G01 has a bottom fill port and is fully sealed with a pressure relief valve. Product is pumped in using the tanker truck pump. There are no pumps at the facility, trucks are gravity filled from the AST.</b>	

**II. TANK INFORMATION (required)**

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height. <b>12,000 gallons</b>	
9A. Tank Internal Diameter (ft) <b>8 ft</b>	9B. Tank Internal Height (or Length) (ft) <b>32 ft</b>
10A. Maximum Liquid Height (ft) <b>28 ft</b>	10B. Average Liquid Height (ft)
11A. Maximum Vapor Space Height (ft) <b>4 ft</b>	11B. Average Vapor Space Height (ft)
12. Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights. <b>12,000 gallons</b>	

13A. Maximum annual throughput (gal/yr) 107,625 gal/yr	13B. Maximum daily throughput (gal/day) 5000 gallons (estimated)
14. Number of Turnovers per year (annual net throughput/maximum tank liquid volume) 8.96	
15. Maximum tank fill rate (gal/min) 120 gal/min	
16. Tank fill method <input checked="" type="checkbox"/> Submerged <input type="checkbox"/> Splash <input type="checkbox"/> Bottom Loading	
17. Complete 17A and 17B for Variable Vapor Space Tank Systems <input checked="" type="checkbox"/> Does Not Apply	
17A. Volume Expansion Capacity of System (gal)	17B. Number of transfers into system per year
18. Type of tank (check all that apply): <input checked="" type="checkbox"/> Fixed Roof <input type="checkbox"/> vertical <input checked="" type="checkbox"/> horizontal <input type="checkbox"/> flat roof <input type="checkbox"/> cone roof <input type="checkbox"/> dome roof <input type="checkbox"/> other (describe) <input type="checkbox"/> External Floating Roof <input type="checkbox"/> pontoon roof <input type="checkbox"/> double deck roof <input type="checkbox"/> Domed External (or Covered) Floating Roof <input type="checkbox"/> Internal Floating Roof <input type="checkbox"/> vertical column support <input type="checkbox"/> self-supporting <input type="checkbox"/> Variable Vapor Space <input type="checkbox"/> lifter roof <input type="checkbox"/> diaphragm <input checked="" type="checkbox"/> Pressurized <input type="checkbox"/> spherical <input checked="" type="checkbox"/> cylindrical <input type="checkbox"/> Underground <input type="checkbox"/> Other (describe)	

### III. TANK CONSTRUCTION & OPERATION INFORMATION (optional if providing TANKS Summary Sheets)

19. Tank Shell Construction: <span style="float: right;">Double wall</span>	
<input type="checkbox"/> Riveted <input type="checkbox"/> Gunitite lined <input type="checkbox"/> Epoxy-coated rivets <input checked="" type="checkbox"/> Other (describe) steel AST	
20A. Shell Color White	20B. Roof Color White
20C. Year Last Painted 2015	
21. Shell Condition (if metal and unlined): <input checked="" type="checkbox"/> No Rust <input type="checkbox"/> Light Rust <input type="checkbox"/> Dense Rust <input type="checkbox"/> Not applicable	
22A. Is the tank heated? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
22B. If YES, provide the operating temperature (°F)	
22C. If YES, please describe how heat is provided to tank.	
23. Operating Pressure Range (psig): 0 to -.03	
24. Complete the following section for Vertical Fixed Roof Tanks <input checked="" type="checkbox"/> Does Not Apply	
24A. For dome roof, provide roof radius (ft)	
24B. For cone roof, provide slope (ft/ft)	
25. Complete the following section for Floating Roof Tanks <input checked="" type="checkbox"/> Does Not Apply	
25A. Year Internal Floaters Installed:	
25B. Primary Seal Type: <input type="checkbox"/> Metallic (Mechanical) Shoe Seal <input type="checkbox"/> Liquid Mounted Resilient Seal (check one) <input type="checkbox"/> Vapor Mounted Resilient Seal <input type="checkbox"/> Other (describe):	
25C. Is the Floating Roof equipped with a Secondary Seal? <input type="checkbox"/> YES <input type="checkbox"/> NO	
25D. If YES, how is the secondary seal mounted? (check one) <input type="checkbox"/> Shoe <input type="checkbox"/> Rim <input type="checkbox"/> Other (describe):	
25E. Is the Floating Roof equipped with a weather shield? <input type="checkbox"/> YES <input type="checkbox"/> NO	

25F. Describe deck fittings; indicate the number of each type of fitting:		
<b>ACCESS HATCH</b>		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
<b>AUTOMATIC GAUGE FLOAT WELL</b>		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
<b>COLUMN WELL</b>		
BUILT-UP COLUMN - SLIDING COVER, GASKETED:	BUILT-UP COLUMN - SLIDING COVER, UNGASKETED:	PIPE COLUMN - FLEXIBLE FABRIC SLEEVE SEAL:
<b>LADDER WELL</b>		
PIP COLUMN - SLIDING COVER, GASKETED:	PIPE COLUMN - SLIDING COVER, UNGASKETED:	
<b>GAUGE-HATCH/SAMPLE PORT</b>		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
<b>ROOF LEG OR HANGER WELL</b>		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
<b>VACUUM BREAKER</b>		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
<b>RIM VENT</b>		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
<b>DECK DRAIN (3-INCH DIAMETER)</b>		
OPEN:	90% CLOSED:	
<b>STUB DRAIN</b>		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks <input checked="" type="checkbox"/> Does Not Apply	
26A. Deck Type: <input type="checkbox"/> Bolted <input type="checkbox"/> Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam: <input type="checkbox"/> Continuous sheet construction 5 feet wide <input type="checkbox"/> Continuous sheet construction 6 feet wide <input type="checkbox"/> Continuous sheet construction 7 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 7.5 feet wide <input type="checkbox"/> Continuous sheet construction 5 × 12 feet wide <input type="checkbox"/> Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft <sup>2</sup> )
For column supported tanks:	26G. Diameter of each column:
26F. Number of columns:	

**IV. SITE INFORMATION** (optional if providing TANKS Summary Sheets)

27. Provide the city and state on which the data in this section are based. <p align="center"><i>See TANKS Summary Sheets</i></p>
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft <sup>2</sup> ·day))
33. Atmospheric Pressure (psia)

**V. LIQUID INFORMATION** (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid: <i>See TANKS Summary Sheets</i>			
34A. Minimum (°F)	34B. Maximum (°F)		
35. Average operating pressure range of tank:			
35A. Minimum (psig)	35B. Maximum (psig)		
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)		
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)		
38A. Maximum Liquid Surface Temperature (°F)	38B. Corresponding Vapor Pressure (psia)		
39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.			
39A. Material Name or Composition	<i>Regular Unleaded Gasoline</i>		
39B. CAS Number	<i>86290-81-5</i>		
39C. Liquid Density (lb/gal)	<i>5.9-6.3</i>		
39D. Liquid Molecular Weight (lb/lb-mole)	<i>100-105</i>		
39E. Vapor Molecular Weight (lb/lb-mole)	<i>66</i>		



# Attachment L-4

## TANKS 4.0.9d Emissions Report - Summary Format Tank Identification and Physical Characteristics

**Identification**  
 User Identification: GASOLINE TANK 1  
 City: NEW MARTINSVILLE  
 State: WEST VIRGINIA  
 Company: TRI STATE PETROLEUM  
 Type of Tank: Horizontal Tank  
 Description: Tri-State Petroleum New Martinsville Bulk Plant 302 Gasoline Tank Throughput values from 2014 used and a factor of 5x was used to keep permits thresholds reasonable

**Tank Dimensions**  
 Shell Length (ft): 32.00  
 Diameter (ft): 8.00  
 Volume (gallons): 12,000.00  
 Turnovers: 44.84  
 Net Throughput(gal/yr): 538,125.00

Is Tank Heated (y/n): N  
 Is Tank Underground (y/n): N

**Paint Characteristics**  
 Shell Color/Shade: White/White  
 Shell Condition: Good

**Breather Vent Settings**  
 Vacuum Settings (psig): -0.03  
 Pressure Settings (psig): 0.00

Meteorological Data used in Emissions Calculations: Columbus, Ohio (Avg Atmospheric Pressure = 14.33 psia)

## TANKS 4.0.9d Emissions Report - Summary Format Liquid Contents of Storage Tank

**GASOLINE TANK 1 - Horizontal Tank  
NEW MARTINSVILLE, WEST VIRGINIA**

Daily Liquid Surf. Temperature (deg F)	Liquid Bulk Temp	Vapor Pressure (psia)	Vapor Mol.	Liquid Mass	Vapor Mass	Mol.	Basis for Vapor Pressure

Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight	Fract.	Fract.	Weight	Calculations
Gasoline (RVP 10)	All	53.04	48.06	58.01	51.42	4.5223	4.0917	4.9885	66.0000			92.00	Option 4: RVP=10, ASTM Slope=3

**TANKS 4.0.9d**  
**Emissions Report - Summary Format**  
**Individual Tank Emission Totals**

**Emissions Report for: Annual**

**GASOLINE TANK 1 - Horizontal Tank  
NEW MARTINSVILLE, WEST VIRGINIA**

Components	Losses(lbs)		Total Emissions
	Working Loss	Breathing Loss	
Gasoline (RVP 10)	3,195.66	1,317.42	4,513.09

2/10/2016

**Attachment N-1 - Supporting Emissions Calculations  
Tri-State Petroleum Bulk Plant 302  
Hazardous Air Pollutant  
and  
Volatile Organic Compounds  
Summary Table**

<b>B E N Z E N E</b>	Emission Source	VOC (TPY)	HAP	Vapor Weight Fraction	HAP (TPY)
	Loading Rack - Gasoline	2.56	Benzene	0.0116	0.029666
	Fugitives	2.72	Benzene	0.0116	0.031476
	<b>Benzene Total</b>				<b>0.061142</b>

**NOTES:**

- 1) HAP species Wt composition% for gasoline obtained from from the supplier's (Marathon) MSDS. The highest composition% of the range for each HAP was used as the most conservative assumption, and then converted to Vapor Wt% using Raoult's Law and the Ideal Gas Law per AP-42 Section 7.1.4.

Attachment N-2 Supporting Emissions Calculations

Tri-State Petroleum Bulk Plant 302 - FUGITIVE EMISSIONS WORKSHEET					
Service	Component Type	Number of Components	Emission Factor (kg/hr/source) <sup>1</sup>	VOC Emission (ton/yr)	VOC Emission (lb/yr)
G-01					
Pressure Relief Seals	Valves - Gas/Vapor	0	0.00597	0.000	0.0
Pumps	Pumps - Light Liquid	0	0.0199	0.000	0.0
Valves	Valves - Gas/Vapor	4	0.00597	0.231	461.1
Flanges	Connectors	4	0.00183	0.071	141.3
<b>Total</b>				<b>0.301</b>	<b>602.4</b>

(1) - Table 2-1 SOCM Average Emission Factors  
 USEPA Protocol for Equipment Leak Emission Estimates  
 November 1995  
 EPA-4531R-95-017

**ATTACHMENT P**  
**AIR QUALITY PERMIT NOTICE**  
**Notice of Application**

Notice is given that Tri-State Petroleum Corporation has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit Registration for a Petroleum Bulk Storage Transfer Facility located on 98 South Main Street in New Martinsville, in Wetzel County, West Virginia. The latitude and longitude coordinates are: 39.638215, -80.866619

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: Benzene at 0.301 tons per year.

Startup of operation is planned to begin on or about the 1 day of April, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57<sup>th</sup> Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.  
Dated this the 15<sup>th</sup> day of February, 2016.

By: Tri-State Petroleum Corporation  
Edward Coyne  
Chief Operating Officer  
2627 Vance Avenue  
Wheeling, WV 26003