Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060

dom.com

December 11, 2015

BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED
7014 3490 0000 0448 4785

William F. Durham
Director, Division of Air Quality
WVDEP
601 57th Street
Charleston, WV 25304

ID # 103-00009
Reg PD15-105
Company Dominion Transmission
Facility ~~Hastings Extraction~~ Initials EVL
SPH

RE: **Dominion Transmission, Inc.**
Hastings Extraction Plant
Permit Determination Request

Dear Mr. Durham:

Dominion Transmission, Inc. (Dominion) is submitting this request for permit determination for the replacement of a tank (V-3050) at our Hastings Extraction Plant, a natural gas extraction facility, located near Pine Grove, Wetzel County, West Virginia. Tank V-3050 is located at the Slug Catcher Area and will be replaced with a horizontal aboveground 30,000 gallon tank used to store drip gasoline.

The tank is a pressurized tank that receives drip gasoline from wells via existing piping. There is no emission point for tank V-3050 as it only has one relief valve, which is used for emergency purposes only. Since the tank is completely enclosed and under pressure, there are no emissions from the new tank. In addition:

- NSPS Subpart OOOO (and proposed NSPS Subpart OOOOa) would not apply since potential to emit (PTE) calculations for VOC are below 6 tons/yr as stated in 60.5365(e) (and proposed 63.5365a(e)).

- NSPS Subpart Kb would not apply since this is a pressurized tank without emissions to the atmosphere as stated in 60.110b(d)(2).

Based on potential emissions being below "stationary source" thresholds and the replacement tank having "no substantive requirements of an emission control rule" as stated under West Virginia's R13 Regulations (§45-13-2), Dominion believes a permit is not necessary for the installation and operation of the replacement tank V-3050.

If you require any additional information, please contact Rebekah Remick at 804-273-3536 or via email at Rebekah.J.Remick@dom.com.

Sincerely,

Amanda Tornabene

Amanda B. Tornabene
Director, Gas Environmental Services

Entire Document
NON-CONFIDENTIAL

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

PERMIT DETERMINATION FORM (PDF)

FOR AGENCY USE ONLY: PLANT I.D. # _____

PDF # _____ PERMIT WRITER: _____

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):
Dominion Transmission, Inc.

2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE):
Hastings Extraction Plant
(new tank will be at the Slug Catcher Area)

3. NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (**NAICS**) CODE:
211112

4A. MAILING ADDRESS:
925 White Oaks Blvd., Bridgeport, WV 26330

4B. PHYSICAL ADDRESS:
Route 20, Pine Grove, WV 26419

5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE **MAP** AS **ATTACHMENT A**):
From Clarksburg, take Route 20 North approximately 37 miles to Hastings. The Extraction Plant is on the left side of the road.

5B. NEAREST ROAD:
Route 20

5C. NEAREST CITY OR TOWN:
Pine Grove, WV

5D. COUNTY:
Wetzel

5E. UTM NORTHING (KM):
4377.66

5F. UTM EASTING (KM):
528.64

5G. UTM ZONE:
17

6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED:
Rebekah Remick

6B. TITLE:
Environmental Consultant

6C. TELEPHONE:
804-273-3536

6D. FAX:
804-273-2964

6E. E-MAIL:
Rebekah.J.Remick@dom.com

7A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY):
103-00009

7B. PLEASE LIST ALL CURRENT 45CSR13, 45CSR14, 45CSR19 AND/OR TITLE V (45CSR30) PERMIT NUMBERS ASSOCIATED WITH **THIS** PROCESS (FOR AN EXISTING FACILITY ONLY):
R13-2468D, R30-10300009-2011

7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST: No

8A. TYPE OF EMISSION SOURCE (CHECK ONE):
☒ **NEW SOURCE** ☐ **ADMINISTRATIVE UPDATE**
☐ **MODIFICATION** ☐ **OTHER** (PLEASE EXPLAIN IN 11B)

8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE APPLICANT'S CONSENT TO UPDATE THE EXISTING PERMIT WITH THE INFORMATION CONTAINED HEREIN?
☐ **YES** ☐ **NO**

9. IS *DEMOLITION* OR PHYSICAL *RENOVATION* AT AN EXISTING FACILITY INVOLVED? ☒ **YES** ☐ **NO**

10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE:
3/1/16

10B. DATE OF ANTICIPATED START-UP:
5/1/16

11A. PLEASE PROVIDE A **DETAILED PROCESS FLOW DIAGRAM** SHOWING EACH PROPOSED OR MODIFIED PROCESS EMISSION POINT AS **ATTACHMENT B**.

11B. PLEASE PROVIDE A **DETAILED PROCESS DESCRIPTION** AS **ATTACHMENT C**.

12. PLEASE PROVIDE **MATERIAL SAFETY DATA SHEETS (MSDS)** FOR ALL MATERIALS PROCESSED, USED OR PRODUCED AS **ATTACHMENT D**. FOR CHEMICAL PROCESSE, PLEASE PROVIDE A MSDS FOR EACH COMPOUND EMITTED TO AIR.

13A. **REGULATED AIR POLLUTANT EMISSIONS:**

⇒ **FOR A NEW FACILITY,** PLEASE PROVIDE PLANT WIDE EMISSIONS BASED ON THE POTENTIAL TO EMIT (PTE) FOR THE FOLLOWING AIR POLLUTANTS INCLUDING ALL PROCESSES.

⇒ **FOR AN EXISTING FACILITY,** PLEASE PROVIDE THE PROPOSED CHANGE IN EMISSIONS BASED ON THE PTE OF ALL PROCESS CHANGES FOR THE FOLLOWING AIR POLLUTANTS.

PTE FOR A GIVEN POLLUTANT IS TYPICALLY BEFORE AIR POLLUTION CONTROL DEVICES AND IS COLLECTED BASED ON THE MAXIMUM DESIGN CAPACITY OF PROCESS EQUIPMENT.

POLLUTANT	HOURLY PTE (LB/HR)	YEARLY PTE (TON/YR) (HOURLY PTE MULTIPLIED BY 8760 HR/YR) DIVIDED BY 2000 LB/TON
PM	--	--
PM_{10}	--	--
VOCs	N/A – Pressurized tank	N/A – Pressurized tank
CO	--	--
NO_x	--	--
SO_2	--	--
Pb	--	--
HAPs (AGGREGATE AMOUNT)	N/A – Pressurized tank	N/A – Pressurized tank
TAPs (INDIVIDUALLY)*		
OTHER (INDIVIDUALLY)*		

* ATTACH ADDITIONAL PAGES AS NEEDED

13B. PLEASE PROVIDE ALL **SUPPORTING CALCULATIONS** AS **ATTACHMENT E.**

CALCULATE AN HOURLY AND YEARLY PTE OF EACH PROCESS EMISSION POINT (SHOWN IN YOUR DETAILED PROCESS FLOW DIAGRAM) FOR ALL AIR POLLUTANTS LISTED ABOVE INCLUDING INDIVIDUAL HAP'S (LISTED IN SECTION 112[b] OF THE 1990 CAAA), TAP'S (LISTED IN 45CSR27), AND OTHER AIR POLLUTANTS (E.G. POLLUTANTS LISTED IN TABLE 45-13A OF 45CSR13, MINERAL ACIDS PER 45CSR7, ETC.).

14. **CERTIFICATION OF DATA**

I, BRIAN SHEPPARD (*TYPE NAME*) ATTEST THAT ALL THE REPRESENTATIONS CONTAINED IN THIS APPLICATION, OR APPENDED HERETO, ARE TRUE, ACCURATE, AND COMPLETE TO THE BEST OF MY KNOWLEDGE BASED ON INFORMATION AND BELIEF AFTER REASONABLE INQUIRY, AND THAT I AM A ***RESPONSIBLE OFFICIAL*** (*PRESIDENT, VICE PRESIDENT, SECRETARY OR TREASURER, GENERAL PARTNER OR SOLE PROPRIETOR*) OF THE APPLICANT.

SIGNATURE OF RESPONSIBLE OFFICIAL: B T. Sheppard

TITLE: VICE PRESIDENT, PIPELINE OPERATIONS DATE: 12 / 03 / 2015

** THE DEFINITION OF THE PHRASE '***RESPONSIBLE OFFICIAL***' CAN BE FOUND AT 45CSR13, SECTION 2.23.

NOTE: PLEASE CHECK ENCLOSED ATTACHMENTS:

☒ **ATTACHMENT A** ☒ **ATTACHMENT B** ☒ **ATTACHMENT C** ☒ **ATTACHMENT D** ☐ **ATTACHMENT E**

RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

THE PERMIT DETERMINATION FORM WITH THE INSTRUCTIONS CAN BE FOUND ON DAQ'S PERMITTING SECTION WEB SITE: ***www.dep.wv.gov/daq***

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WV DEP / DIV. OF AIR QUALITY

Attachment A

Facility Location

Mockingbird Hill Rd
Lower Rd
Mockingbird Hill Rd
South Fork Fishing Creek
State Hwy 20
Creek
State Hwy
Piney Fork Rd
Piney Fork
Piney Fork
500 ft
200 m

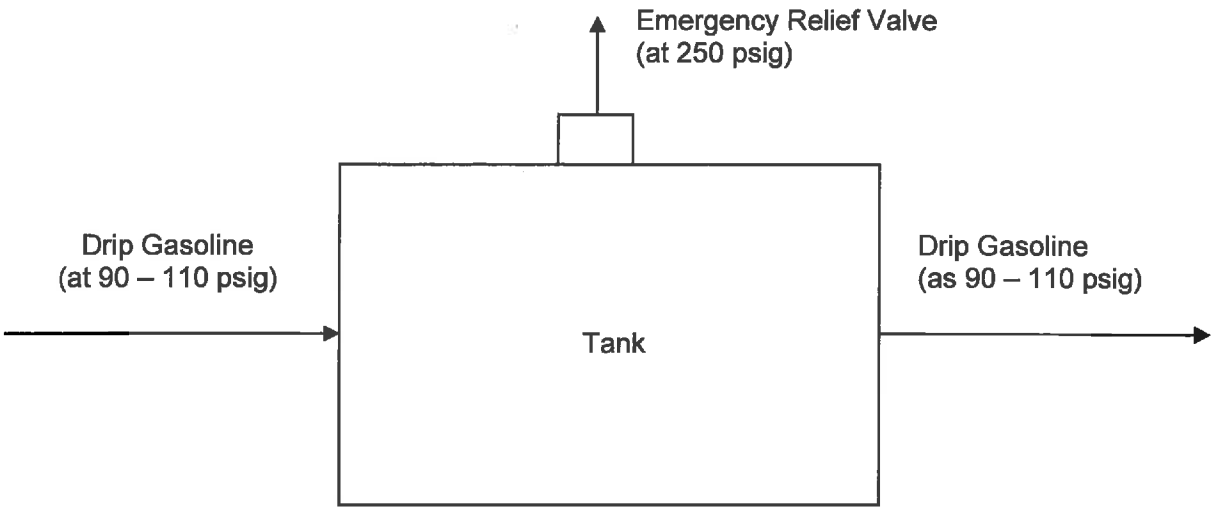

V-3050
Slug Catcher Area
Google earth

Attachment B

Process Flow Diagram

Process Flow Diagram for the Tank (V-3050)

Hastings Extraction Plant (Slug Catcher Area)



Attachment C

Process Description

Process Description

Hastings Extraction Plant is a natural gas extraction facility that services a natural gas pipeline system. The facility takes natural gas from Hastings Electric Compressor Station and extracts propane, isobutane, n-butane, and natural gasoline. Various equipment is involved in this process including a de-ethanizer, de-propanizer, de-butanizer, C4 splitter, and drip gasoline fractionators. The products are piped to storage tanks at the Galmish loadout area for transport via truck and rail. Products can also be sent to Ben's Run (natural gasoline barge loading) and to Charleroi and Hutchinson (propane).

The Slug Catcher Area of Hastings Extraction Plant collects drip fluids from three natural gas pipelines. These pipelines are pigged to remove liquids from the pipelines, and the liquids that collect during this process are captured in the slug catcher. The drip from the slug catcher and the separator is transferred and stored in storage tanks, where the water is gravity separated and sent to a waste tank at atmospheric pressure. The flash gas from the drip tanks is captured and compressed at Hastings Compressor Station, while the liquids are pumped to the Hastings Electric Compressor Station to further remove water from the drip fluids by heat and gravity separation before being transferred into a storage tank at Hastings Extraction Plant. The sources of emissions from this area are generally fugitive in nature.

The purpose of this permit determination is for the replacement of the one of the drip gasoline storage tanks (V-3050) in the Slug Catcher Area. The tank is a pressurized tank that receives drip gasoline from wells via existing piping. There is no emission point for tank V-3050 as it only has one relief valve, which is used for emergency purposes only. Since the tank is completely enclosed and under pressure, there are no emissions from the new tank.

New Source Performance Standards (NSPS) Subpart Kb

Tank V-3050 is not subject to this Subpart since it is a "pressure vessel designed to operate in excess of 204.9 kPa and without emissions to the atmosphere" as stated in 60.110b(d)(2). The drip gasoline enters and leaves the tank at 90 – 110 psig (620 – 758 kPa).

New Source Performance Standards (NSPS) Subpart OOOO

Since potential to emit (PTE) calculations are below 6 tons/yr, tank V-3050 is not subject to this subpart as it does not meet the applicability section of 60.5365(e).

New Source Performance Standards (NSPS) Subpart OOOOa

Since potential to emit (PTE) calculations are below 6 tons/yr, tank V-3050 is not subject to this subpart as it does not meet the applicability section of 60.5365a(e).

West Virginia Minor Source Regulations (R13)

The replacement of tank V-3050 does not trigger permitting as potential to emit calculations are below exemption thresholds of:

- 6 lbs/hr and 10 tons/yr, or
- 144 lbs/day, or
- 2 lbs/hr or 5 tons/yr of HAPs

In addition, the tank is not "subject to any substantive requirement of an emission control rule" (i.e. no annual inspections are required) as stated above. Therefore, the tank is not deemed to be a "stationary source" and does not require permitting.

Attachment D

Material Safety Data Sheets (MSDS)

SAFETY DATA SHEET

1. Identification

Product identifier	**Natural Gas Pipeline and Dehydration Liquids**
Other means of identification	
Product code	2108689
Recommended use	Raw material for fuel production.
Recommended restrictions	-

Manufacturer / Importer / Supplier / Distributor information

Company name	Dominion Transmission, Inc.
Address	445 West Main Street Clarksburg, WV 26302-2450
Telephone	304-627-3761
E-mail	www.dom.com
Contact person	Safety Department
Emergency phone number	1-888-264-8240

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 2 (vascular system)
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA hazard(s)	Simple asphyxiant	

Label elements

Hazard symbol

Signal word	Danger
Hazard statement	Extremely flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May cause cancer. May cause genetic defects. Suspected of damaging fertility or the unborn child. May displace oxygen and cause rapid suffocation.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area.
Response	If exposed or concerned: Get medical advice/attention. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. In case of fire: Use foam, carbon dioxide, dry powder or water fog for extinction.
Storage	Store locked up. Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Not classified.

Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2

3. Composition/information on ingredients

Substance

Hazardous components

Chemical name	Common name and synonyms	CAS number	%
Complex mixture of aliphatic aromatic and cyclic hydrocarbons		-	70-90
Toluene		108-88-3	2-10
Xylene		1330-20-7	1-10
Benzene		71-43-2	0.4-10

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move injured person into fresh air and keep person calm under observation. If breathing is difficult, give oxygen. Get medical attention if any discomfort continues.

Skin contact Immediately remove contaminated clothing. Wash with soap and water. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention if irritation develops or persists.

Ingestion Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and take these instructions. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed Irritation of eyes and mucous membranes. Skin irritation. Dermatitis. Ingestion may cause irritation and malaise. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information First aid personnel must be aware of own risk during rescue.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical, CO2, sand, earth, water spray or regular foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Specific hazards arising from the chemical The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Stay upwind. Evacuate area. Provide adequate ventilation. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid contact with skin. Wear suitable protective clothing, gloves and eye/face protection. For personal protection, see section 8 of the MSDS.

Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Remove sources of ignition. Beware of the explosion danger. Small Spills: Absorb spillage with non-combustible, absorbent material. Large Spills: Remove with vacuum trucks or pump to storage/salvage vessels. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labeled container. Wash area with soap and water. If necessary dike the product with dry earth, sand or similar non-combustible materials.
Environmental precautions	Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not contaminate water. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling	Access to work area should be restricted to people handling the product only. Should be handled in closed systems, if possible. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapors. Wear appropriate personal protective equipment. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. Ground container and transfer equipment to eliminate static electric sparks. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Immediately change contaminated clothes. Do not eat, drink or smoke when using the product. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Follow rules for flammable liquids. Keep away from heat, sparks and open flame. Keep in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Xylene (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Benzene (CAS 71-43-2)	REL	0.1 ppm
	STEL	1 ppm
Toluene (CAS 108-88-3)	REL	375 mg/m3
		100 ppm
	STEL	560 mg/m3
		150 ppm
Xylene (CAS 1330-20-7)	REL	435 mg/m3
		100 ppm
	STEL	655 mg/m3
		150 ppm

Biological limit values

US. ACGIH. BEIs. Biological Exposure Indices

Components	Value	Determinant	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercaı uric acid	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	*
	0.03 mg/l	Toluene	*
	0.02 mg/l	Toluene	*
Xylene (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	*

* - For sampling details, please see the source document.

Exposure guidelines No exposure standards allocated.

US. ACGIH Threshold Limit Values

Benzene (CAS 71-43-2)	Can be absorbed through the skin.

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

BENZENE (CAS 71-43-2)	Can be absorbed through the skin.
TOLUENE; TOLUOL (CAS 108-88-3)	Can be absorbed through the skin.

US. Minnesota Hazardous Substances List (Minn. Rules 5206.0400).

Toluene (CAS 108-88-3)	Skin designation applies.

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.
Xylene (CAS 1330-20-7)	Can be absorbed through the skin.

Appropriate engineering controls Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Provide easy access to water supply and eye wash facilities. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear goggles/face shield.

Skin protection

Hand protection Wear protective gloves. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other Protection suit must be worn. Anti-static and flame-retardant protective clothing is recommended.

Respiratory protection In case of inadequate ventilation, use air-supplied full-mask. Seek advice from local supervisor.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Wash hands after handling. Launder contaminated clothing before reuse. Private clothes and working clothes should be kept separately. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Clear, colorless liquid.
Physical state	Liquid.
Form	Liquid.
Color	Clear to brown.
Odor	Gasoline.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	36 - 210 °F (2.2 - 98.9 °C) (1 atm)
Flash point	< 0 °F (< -17.8 °C)
Evaporation rate	Moderately fast
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1
Flammability limit - upper (%)	7.6
Explosive limit - lower (%)	Not available.

Explosive limit - upper (%)	Not available.
Vapor pressure	10 - 34 psi
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	536 °F (280 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	Not applicable.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, sparks, flames, elevated temperatures. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Ingestion may cause irritation and malaise.
Inhalation	Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Causes skin irritation. Repeated exposure may cause skin dryness or cracking. May be absorbed through the skin.
Eye contact	May cause eye irritation on direct contact.
Symptoms related to the physical, chemical and toxicological characteristics	Skin irritation. Dermatitis. Irritation of eyes and mucous membranes. Irritation of nose and throat.

Information on toxicological effects

Acute toxicity

Human evidence indicates that the product has very low acute oral, dermal or inhalation toxicity. However, it can produce severe injury if taken into the lung as a liquid, and there may be profound central nervous system depression following prolonged exposure to high levels of vapor. Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. Irritant effect on skin. May irritate and cause stomach pain, vomiting, diarrhea and nausea.

Components	Species	Test Results
Benzene (CAS 71-43-2)		
Acute		
Oral		
LD50	Rat	930 mg/kg
Toluene (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	14.1 ml/kg
Inhalation		
LC50	Rat	49000 mg/m³, 4 Hours
Oral		
LD50	Rat	636 mg/kg

Components	Species	Test Results
Xylene (CAS 1330-20-7)		
Acute		
Oral		
LD50	Rat	4300 mg/kg

Skin corrosion/irritation Causes skin irritation. Pre-existing skin conditions including dermatitis might be aggravated by exposure to this product.

Serious eye damage/eye irritation May cause eye irritation on direct contact.

Respiratory sensitization Not classified.

Skin sensitization Not a skin sensitizer.

Germ cell mutagenicity May cause genetic defects.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2)	1 Carcinogenic to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
Xylene (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2)	Cancer hazard.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure No information about adverse effects due to exposure.

Aspiration hazard Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Chronic effects Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/chapping and oil acne. May cause damage to the liver.

Further information Components of the product may be absorbed into the body through the skin.

12. Ecological information

Ecotoxicity Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Components		Species	Test Results
Benzene (CAS 71-43-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/l, 48 Hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5 mg/l, 96 Hours
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	5.5 mg/l, 96 hours
Xylene (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8 mg/l, 96 Hours

Persistence and degradability Expected to be inherently biodegradable.

Bioaccumulative potential Has the potential to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Benzene	2.13
Toluene	2.73
Xylene	3.2

Mobility in soil Based on the calculation model the product has a low potential of being absorbed in the soil.

Mobility in general	The product is insoluble in water. It will spread on the water surface while some of the components will eventually sediment in water systems. The volatile components of the product will spread in the atmosphere.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential. Oil spills are generally hazardous to the environment.

13. Disposal considerations

Disposal instructions	Dispose in accordance with all applicable regulations. This material and/or its container must be disposed of as hazardous waste.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	D001
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Not available.

14. Transport information

DOT

UN number	UN1268
UN proper shipping name	Petroleum products, n.o.s. (Complex mixture of aliphatic aromatic and cyclic hydrocarbons), MARINE POLLUTANT
Transport hazard class(es)	3
Subsidary class(es)	Not available.
Packing group	I
Special precautions for user	Not available.
Labels required	3
Special provisions	144, T11, TP1, TP8
Packaging exceptions	150
Packaging non bulk	201
Packaging bulk	243

IATA

UN number	UN1268
UN proper shipping name	Petroleum products, n.o.s. (Complex mixture of aliphatic aromatic and cyclic hydrocarbons)
Transport hazard class(es)	3
Subsidary class(es)	-
Packaging group	I
Labels required	3
ERG Code	3H
Special precautions for user	Not available.

IMDG

UN number	UN1268
UN proper shipping name	PETROLEUM PRODUCTS, N.O.S. (Complex mixture of aliphatic aromatic and cyclic hydrocarbons), MARINE POLLUTANT
Transport hazard class(es)	3
Subsidary class(es)	-
Packaging group	I
Environmental hazards	
Marine pollutant	Yes
Labels required	3
EmS	F-E, S-E
Special precautions for user	Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200 (OSHA) and 8 CCR § 5194 (Cal/OSHA). All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2) 29 CFR 1910.1028

CERCLA Hazardous Substance List (40 CFR 302.4)

Benzene (CAS 71-43-2) LISTED

Toluene (CAS 108-88-3)	LISTED
Xylene (CAS 1330-20-7)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	Yes

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3)	6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3)	594

Food and Drug Administration (FDA)	Not regulated.
US state regulations	WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

US. New Jersey Worker and Community Right-to-Know Act

Benzene (CAS 71-43-2)	500 LBS
Toluene (CAS 108-88-3)	500 LBS
Xylene (CAS 1330-20-7)	500 LBS

US. Pennsylvania RTK - Hazardous Substances

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

US. Rhode Island RTK

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)
Xylene (CAS 1330-20-7)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last version

Issue date	10-09-2012
Revision date	-
Version #	01
Further information	Not available.
References	IARC Monographs. Overall Evaluation of Carcinogenicity (Volumes 1-102) Registry of Toxic Effects of Chemical Substances (RTECS)
Disclaimer	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.