



**Title V Operating Permit  
Renewal Application**

Permit Number V-20-028 R1

September 2025

Prepared for:

ANR Pipeline Company  
Madisonville Compressor Station  
Madisonville, Hopkins County, Kentucky

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## **1.0 INTRODUCTION**

ANR Pipeline Company (ANR) owns and operates the Madisonville Compressor Station in Madisonville, Hopkins County, Kentucky. The Madisonville Compressor Station is classified as a major source under Title V regulations. Consistent with Federal Part 70 requirements, Kentucky’s Department for Environmental Protection (DEP) Title V Operating Permit program is published under Chapter 401 of the Kentucky Administrative Regulations (KAR). The facility is a major source of Carbon Monoxide (CO) and Carbon Dioxide Equivalent (CO<sub>2e</sub>).

### **1.1 DOCUMENT PURPOSE**

Madisonville Compressor Station currently operates under Kentucky Title V Operating Permit No. V-20-028 R1. This permit was issued on April 13, 2021, revised on May 10, 2022, and is scheduled to expire on April 13, 2026. The renewal application is due by October 13, 2025, six months prior to the permit expiration.

This submittal constitutes the renewal application required by the referenced Title V Permit.

### **1.2 PERMIT REQUEST**

ANR is committed to demonstrating compliance with all federal and state air quality permitting requirements. This permit application demonstrates compliance with both federal and state requirements for permit renewal. This application is intended to satisfy all requirements of Title V of the 1990 Clean Air Act (CAA) as encoded in 40 CFR Part 70 and in 401 Kentucky Air Regulations (KAR) 52:020, Section 12, “Title V Permits”.

Section 503(d) of the CAA provides that, once a timely and complete application for an operating permit has been filed, the applicant is shielded from enforcement action for operating without a permit until the permit has been issued or other action has been taken on the application. Therefore, by submitting this application, ANR requests a permit shield to avoid enforcement action for operating without a permit during the period in which this permit application is under review if the current permit expires before a new permit is issued.

By signing the DEP7007AI application form provided by the Kentucky Energy and Environmental Cabinet, the responsible official certifies that this submittal constitutes a complete application. The responsible official for the Madisonville facility has provided the required certification, and ANR requests that the Kentucky Energy and Environmental Cabinet provide the determination that this application is complete. Pursuant to 40 CFR 70.7, the application is deemed complete if a notice of incompleteness is not received within 60 days. There are no fees associated with a Title V Renewal application in Kentucky.



## **1.3 CONTACT INFORMATION**

If there are any questions or comments regarding this application, please contact Melinda Holdsworth of TC Energy at (832) 320-5665 or via email at [Melinda\\_Holdsworth@tcenergy.com](mailto:Melinda_Holdsworth@tcenergy.com).

## **1.4 REPORT ORGANIZATION**

The remainder of this renewal application is divided into the following sections and appendices:

- Section 2.0: Facility Information
- Section 3.0: Regulatory Applicability Summary
- Appendix A: Application Form
- Appendix B: Facility Map, Plot Plan and Process Flow Diagram
- Appendix C: Emission Calculations
- Appendix D: Secretary of State Documentation

The table of contents contains a detailed listing of sections and appendices. The required form for a Title V renewal with no modifications (DEP7007AI) is located in Appendix A.



## 2.0 FACILITY INFORMATION

### 2.1 SITE LOCATION

ANR's Madisonville Station is located in Madisonville, Hopkins County, Kentucky. Figure 1 of Appendix B is an aerial photograph that identifies the plant layout.

Hopkins County is designated as "attainment" or "unclassifiable" for all pollutants for which National Ambient Air Quality Standards (NAAQS) have been promulgated.

The operations at the station are categorized under Standard Industrial Classification code 4922, *Natural Gas Transmission*, and under the North American Industry Classification System code 486210, *Pipeline Transportation of Natural Gas*.

### 2.2 EMISSION SOURCE DESCRIPTION

The facility transports natural gas along the pipeline by receiving inlet natural gas and compressing the gas to increase the pressure in the pipeline and maintain the downstream flow.

The Madisonville Compressor Station consists of one (1) 15,473 hp natural gas-fired Solar Mars 100 turbine (EU011), one (1) 22,759 hp natural gas-fired Solar Titan 130 turbine (EU012), one (1) 880 hp natural gas-fired emergency generator (EU013), and one (1) 1.6 MMBtu/hr natural gas-fired fuel gas heater (EU014).

Table 2-1: Description of Significant Emission Units

<b>Emission Unit #</b>	<b>Description of Emission Unit</b>
EU011	15,473 hp Stationary Gas Compressor Turbine Solar Mars 100
EU012	22,759 hp Stationary Gas Compressor Turbine Solar Titan 130
EU013	880 hp Internal Combustion Emergency Engine/Generator Waukesha VGF-L36GL (4SLB)
EU014	1.6 MMBtu/hr Fuel Gas Heater

None of these emission units use add-on emission control equipment to reduce emissions, and thus, the station is exempt from the compliance assurance monitoring (CAM) requirements in 40 CFR 64 (see Section 3.4 for further explanation).

The Madisonville Compressor Station includes a number of insignificant emission sources pursuant to 401 KAR 52:020, Section 6. Insignificant activities at the Madisonville Compressor Station are identified in Table 2-2 below.



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Table 2-2: Insignificant Activities under 401 KAR 52:020, Section 6

<b>Equipment ID</b>	<b>Description of Insignificant Activity</b>
IA1	Thirty (30) Natural Gas-Fired Space Heaters (0.0725 MMBtu/hr each)
T1	12,000 Gallon Condensate Storage Tank
T16	1,200 Gallon Wastewater Storage Tank
FUG	Fugitive Emissions (includes fugitives from equipment leaks and blowdowns)
N/A	Maintenance Welding and Painting
N/A	Two (2) Solvent Parts Washers

### **2.3 REVISIONS TO THE PERMIT**

There have been no changes to significant emission sources at the station since the issuance of the current permit. There are no proposed modifications to the Madisonville Compressor Station as a result of this renewal application. Any changes in emissions represented in this renewal application are related directly to the use of updated emission factors, updated fugitive component counts, calculation methods, updated fuel consumption data, natural gas heating contents, or rounding. The facility remains a major source under Title V regulations.



## **3.0 REGULATORY APPLICABILITY SUMMARY**

The Madisonville Station is subject to a variety of federal and state air quality regulations which are discussed in this section.

### **3.1 PREVENTION OF SIGNIFICANT DETERIORATION**

Madisonville Compressor Station is located in Hopkins County, which is designated by the U.S. EPA 40 CFR §81.318 as "attainment" or "unclassifiable" for all criteria pollutants. As such, new construction or modifications that result in emission increases are potentially subject to the Prevention of Significant Deterioration (PSD) permitting regulations. PSD applicability depends on the existing status of the facility (i.e., major or minor source) and the net emission increases associated with the project.

The Madisonville Compressor Station is not a major stationary source under PSD regulations because the potential to emit is not greater than 250 tons per year for any regulated air pollutants.

ANR is not requesting any modification with this application that would subject emission units at the Madisonville Compressor Station to PSD requirements.

### **3.2 NEW SOURCE PERFORMANCE STANDARDS (NSPS)**

NSPS contained in 40 CFR 60 require new, modified, or reconstructed sources to control emissions to the level achievable by the best demonstrated technology as specified in the relevant regulations. These NSPS regulations were reviewed to determine their applicability to the Madisonville Station equipment or to confirm non-applicability as appropriate. The results of this review are summarized below by regulatory citation.

#### **3.2.1 40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units**

Subpart Dc applies to steam generating units with a maximum design heat input capacity of greater than or equal to 10 MMBtu/hr, but less than or equal to 100 MMBtu/hr, which are constructed, modified or reconstructed after June 9, 1989 (per 40 CFR §60.40c(a)). Steam generating units are defined in 40 CFR §60.41c as devices that combust fuel and heat water or any heat transfer medium. There are no steam generating units at this facility greater than 10 MMBtu/hr. Therefore, this regulation is not applicable.



**3.2.2 40 CFR 60 Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and prior to May 19, 1978**

Subpart K applies to petroleum storage vessels with storage capacity greater than 40,000 gallons for which construction, reconstruction, or modification commenced after June 11, 1973 and prior to May 19, 1978. There are no petroleum storage vessels with capacity greater than 40,000 gallons at this facility. Therefore, this regulation is not applicable.

**3.2.3 40 CFR 60 Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and prior to July 23, 1984**

Subpart Ka applies to petroleum storage vessels with storage capacity greater than 40,000 gallons for which construction, reconstruction, or modification commenced after May 18, 1978 and prior to July 23, 1984. There are no petroleum storage vessels with capacity greater than 40,000 gallons at this facility. Therefore, this regulation is not applicable.

**3.2.4 40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 and On or Before October 4, 2023**

Subpart Kb applies to volatile organic liquid storage vessels with storage capacity greater than 75 cubic meters (19,812.9 gallons) for which construction, reconstruction, or modification commenced after July 23, 1984, and on or before October 4, 2023. There are no volatile organic liquid storage vessels with capacity greater than 75 cubic meters (19,812.9 gallons) at this facility. Therefore, this regulation is not applicable.

**3.2.5 40 CFR 60 Subpart Kc - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023**

Subpart Kc applies to storage vessels for which construction, reconstruction, or modification commenced after October 4, 2023. There are no volatile organic liquid storage vessels with capacity greater than or equal to 75.7 cubic meters (20,000 gallons) at this facility and all storage vessels commenced construction prior to the applicability date. Therefore, this regulation is not applicable.

**3.2.6 40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines**

Subpart GG applies to stationary gas turbines for which construction, modification, or reconstruction commenced after October 3, 1977. The Solar Mars and Solar Titan turbines (EU011 and EU012) are



regulated under 40 CFR 60 Subpart KKKK and are, therefore, exempt from the requirements of Subpart GG (40 CFR §60.4305(b)).

### **3.2.7 40 CFR 60 Subpart KKK - Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011**

Subpart KKK applies to onshore natural gas processing plants. This regulation is not applicable to the Madisonville Station because the facility is not a natural gas processing plant as defined in the regulation.

### **3.2.8 40 CFR 60 Subpart LLL - Standards of Performance for SO<sub>2</sub> Emissions From Onshore Natural Gas Processing for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011**

Subpart LLL applies to facilities that process natural gas: each sweetening unit, and each sweetening unit followed by a sulfur recovery unit. The Madisonville Station does not operate a sweetening unit or a sulfur recovery unit. Therefore, this regulation is not applicable.

### **3.2.9 40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)**

Subpart IIII applies to manufacturers, owners, and operators of stationary CI ICE. The Madisonville Station does not operate any stationary CI ICE; therefore, this regulation does not apply.

### **3.2.10 40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE)**

Subpart JJJJ applies to manufacturers, owners, and operators of stationary SI ICE constructed after January 1, 2009. The emergency generator (EU013) at the Madisonville Compressor Station is rated at 880 horsepower and was manufactured after 2009. Therefore, this engine is subject to the requirements of Subpart JJJJ. The Madisonville Station will continue to comply with this rule as it applies to this emission unit.

### **3.2.11 40 CFR 60 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines**

Subpart KKKK applies to stationary combustion turbines that commenced construction, modification, or reconstruction after February 18, 2005. This regulation is applicable to the Madisonville Compressor Station because the Solar Mars and Solar Titan turbines (EU011 and EU012) have a peak heat input of greater than 10 MMBtu/hr and were constructed after February 18, 2005. The turbines are subject to the requirements of Subpart KKKK and will continue to comply with the applicable requirements.



**3.2.12 40 CFR 60 Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015**

Subpart OOOO establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO<sub>2</sub>) emissions from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after August 23, 2011, and on or before September 18, 2015. The requirements defined for transmission sources are not applicable to this site.

**3.2.13 40 CFR 60 Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015, and on or before December 6, 2022**

Subpart OOOOa establishes emission standards and compliance schedules for the control of VOC and SO<sub>2</sub> emissions from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after September 18, 2015, and on or before December 6, 2022. The Madisonville Compressor Station installed two natural gas turbines (EU011 and EU012) in 2021 resulting in a horsepower increase and causing the facility to be subject to the provisions of this subpart for the collection of fugitive emission components at the compressor station per 40 CFR §60.5365a(j). There are no other affected facilities (as listed in 40 CFR §60.5365a(a) through (h)) at the compressor station. The fugitive emissions components at the facility currently comply and will continue to comply with the applicable requirements of the regulation.

**3.2.14 40 CFR 60 Subpart OOOOb - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022**

Subpart OOOOb establishes emission standards and compliance schedules for the control of VOC and SO<sub>2</sub> emissions from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after December 6, 2022. The Madisonville Compressor Station is considered a natural gas compression facility and is potentially subject to this regulation. However, all equipment and processes potentially subject to this regulation commenced construction prior to the applicability date and have not been modified or reconstructed. Therefore, this regulation does not apply.

**3.2.15 40 CFR 60 Subpart OOOOc - Emissions Guidelines for Greenhouse Gas Emissions From Existing Crude Oil and Natural Gas Facilities**

Subpart OOOOc establishes emission guidelines and compliance schedules for the control of greenhouse gas (GHG) emissions from designated facilities in the crude oil and natural gas source



category. The issuance of Subpart OOOOc under CAA section 111(d) does not impose binding requirements directly on existing sources. Instead, Subpart OOOOc instructs states in the development, submission, and implementation of state plans to establish performance standards to reduce GHG emissions from designated facilities that are existing sources (commenced construction, modification, or reconstruction on or before December 6, 2022) in the Crude Oil and Natural Gas source category. Each state with a designated facility must develop, adopt, and submit to the EPA its state plan by March 9, 2026. The EPA will evaluate the plan for completeness and then act on the plan via a rulemaking process to either approve or disapprove, in whole or in part. If the EPA approves a state's plan, the provisions in the state plan become federally enforceable with respect to the designated facilities responsible for compliance in the same manner as the provisions of an approved state implementation plan (SIP) are federally enforceable under CAA section 110.

Once the state's plan has been approved and is federally enforceable, Madisonville Compressor Station will evaluate to determine any actions that need to be taken to comply with the new regulations for this station. If a state does not submit a plan for the Emissions Guidelines under Subpart OOOOc by the deadline (March 9, 2026), or if the submitted plan is disapproved by the EPA, the EPA will step in and develop a Federal plan to implement the emission guidelines. This ensures that the guidelines are still enforced, even if the state does not have its own plan in place.

### **3.3 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)**

Federal NESHAP regulations promulgated pursuant to Section 112 of the CAA are found in 40 CFR Parts 61 and 63. In general, NESHAP, or Maximum Achievable Control Technology (MACT) standards apply to major stationary sources of HAP emissions, defined as potential-to-emit of 10 tons or more per year of any single HAP or 25 tons or more per year of any combination of HAP and area stationary sources of HAP emissions (thresholds less than a major source). The Madisonville Station is considered an area source of HAPs. Potentially applicable NESHAPs are discussed below.

#### **3.3.1 40 CFR 61 Subpart M - National Emission Standard for Asbestos**

The Madisonville Station may at times engage in demolition and/or renovation activities involving asbestos-containing materials (ACM). Therefore, the facility could be potentially subject to Subpart M, Standards for Demolition and Renovation (40 CFR §61.145). Procedures are in place to ensure the facility complies with these standards.

#### **3.3.2 40 CFR 61 Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources)**

This regulation is not applicable to the Madisonville Station because the provisions of this subpart apply to sources that are intended to operate in volatile hazardous air pollutant (VHAP) service. "In VHAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least



10 percent by weight a volatile hazardous air pollutant (VHAP) as determined according to the provisions of 61.245(d).” The Madisonville Station does not have any sources that operate in VHAP service.

### **3.3.3 40 CFR 63 Subpart A - General Provisions**

This regulation has general provisions that are referenced by other more specific NESHAP regulations.

### **3.3.4 40 CFR 63 Subpart HH - NESHAP from Oil and Natural Gas Production Facilities**

This regulation is not applicable to the Madisonville Station because the facility is a transmission and storage facility and is not an oil and gas production facility as defined in this regulation.

### **3.3.5 40 CFR 63 Subpart HHH - NESHAP from Natural Gas Transmission and Storage Facilities**

Subpart HHH establishes national emission limitations and operating limitations for natural gas transmission and storage facilities that are major sources of HAP emissions. The rule affects facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final user. The Madisonville Station does not operate an affected source (glycol dehydration unit) and is an area source of HAPs. Therefore, the facility is not subject to this regulation.

### **3.3.6 40 CFR 63 Subpart YYYY - NESHAP for Stationary Combustion Turbines**

NESHAP Subpart YYYY regulates stationary combustion turbines located at major sources of HAP emissions. The Madisonville Station is an area source of HAPs. Therefore, this regulation is not applicable.

### **3.3.7 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE)**

NESHAP Subpart ZZZZ regulates HAP emissions from existing, new, and reconstructed stationary compression ignition (CI) and spark ignition (SI), emergency and non-emergency, RICE located at major and area sources of HAP emissions. NESHAP Subpart ZZZZ is applicable to the emergency generator. However, for this source type, Subpart ZZZZ requirements are met by complying with NSPS Subpart JJJJ as described above.

### **3.3.8 40 CFR 63 Subpart DDDDD - NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters**

The Industrial/Commercial/Institutional Boilers and Process Heaters NESHAP for major sources was promulgated on March 21, 2011, and regulates HAP emissions from new and existing industrial, commercial, or institutional boilers and process heaters located at major sources of HAP emissions. The Madisonville Station is an area source of HAPs. Therefore, this regulation is not applicable.



### **3.3.9 40 CFR 63 Subpart JJJJJJ - NESHAP for Industrial, Commercial and Institutional Boilers Area Sources**

The Industrial/Commercial/Institutional Boilers for area sources was promulgated on March 21, 2011, and regulates HAP emissions from industrial, commercial, or institutional boilers located at area sources of HAP emissions. The Madisonville Station does not operate any boilers. Therefore, this regulation is not applicable.

## **3.4 COMPLIANCE ASSURANCE MONITORING (CAM)**

Enhanced monitoring requirements have been adopted into 40 CFR 64. The enhanced monitoring requirements are referred to as Compliance Assurance Monitoring (CAM). CAM is applicable to sources that have a potential to emit in excess of major source thresholds, not considering “tailpipe” emission controls, and use an “active” control device to achieve compliance with the emission limit. Combustion controls may be considered in evaluating the potential to emit.

An emission unit is subject to CAM if all of the following criteria are satisfied:

- the unit is located at a major source that is required to obtain a Part 70 or Part 71 permit;
- the unit is subject to an emission limitation or standard for a regulated air pollutant;
- the unit uses an active control device to achieve compliance with any such emission limit or standard, and
- the unit has potential pre-controlled emissions of the applicable air pollutant above the major source threshold.

Potential emissions from each turbine are less than the Part 70 major source threshold. Additionally, the turbines do not use any add-on emission controls and are subject to a federal NSPS promulgated after 1990. The emergency generator and fuel gas heater are below the major source thresholds for all pollutants. Therefore, the CAM rule does not apply to these turbines, the emergency generator, or the fuel gas heater.

## **3.5 CHEMICAL ACCIDENT PREVENTION PROVISIONS AND RISK MANAGEMENT PLAN**

The Madisonville Station is not subject to the Chemical Accident Prevention Provisions of 40 CFR Part 68. Applicability to this regulation is based on the type and quantity of certain regulated substances stored at a facility, and the Madisonville Station does not exceed the applicability thresholds (40 CFR 68.10). The facility is not considered a stationary source under 40 CFR 68.3 (Chemical Accident Prevention) because it is regulated under 49 CFR 192, DOT.



### **3.6 ACID RAIN REGULATIONS**

The Madisonville Station is not subject to the federal acid rain regulations found in 40 CFR Parts 72 through 77 because the Station does not own or operate an affected unit as defined in 40 CFR 72.6.

### **3.7 MANDATORY GREENHOUSE GAS REPORTING 40 CFR 98 SUBPARTS C AND W**

The Madisonville Station is subject to Subparts C (General Stationary Fuel Combustion Sources) and W (Petroleum and Natural Gas Systems) of the Mandatory Greenhouse Gas Reporting Rule. The annual report must be submitted no later than March 31 of each calendar year for GHG emissions in the previous calendar year. The Madisonville Station is subject to these requirements; however, there are no requirements in the rule for inclusion into the Title V permit program. Additionally, the Madisonville Station emits more than 25,000 metric tons of CO<sub>2</sub>e per year and is, therefore, required to submit an annual report pursuant to 40 CFR 98.2.

### **3.8 SIP AND STATE ONLY REGULATIONS 401 KAR CHAPTER 50 AND CHAPTER 52**

The applicable requirements under 401 KAR Chapter 50 (Air Quality General Administrative Procedures) and Chapter 52 (Air Quality Permits, Registrations, and Prohibitory Rules) are currently incorporated into the permit. There are no new requirements that need to be incorporated into the Title V permit renewal.



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Appendix A

**Appendix A**

**APPLICATION FORM**



Division for Air Quality

300 Sower Boulevard  
Frankfort, KY 40601  
(502) 564-3999

DEP7007AI

Administrative Information

- Section AI.1: Source Information
- Section AI.2: Applicant Information
- Section AI.3: Owner Information
- Section AI.4: Type of Application
- Section AI.5: Other Required Information
- Section AI.6: Signature Block
- Section AI.7: Notes, Comments, and Explanations

Additional Documentation

Additional Documentation attached

**Source Name:** Madisonville Compressor Station

**KY EIS (AFS) #:** 21- 107-00134

**Permit #:** V-20-028 R1

**Agency Interest (AI) ID:** 44049

**Date:** 2-Sep-25

Section AI.1: Source Information

<b>Physical Location</b>	<b>Street:</b>	<u>7500 Nebo Road</u>		
<b>Address:</b>	<b>City:</b>	<u>Madisonville</u>	<b>County:</b>	<u>Hopkins</u>
			<b>Zip Code:</b>	<u>42431</u>
<b>Mailing Address:</b>	<b>Street or P.O. Box:</b>	<u>700 Louisiana Street, Suite 700</u>		
	<b>City:</b>	<u>Houston</u>	<b>State:</b>	<u>TX</u>
			<b>Zip Code:</b>	<u>77002</u>

Standard Coordinates for Source Physical Location

**Longitude:** 37.3825 (decimal degrees)      **Latitude:** -87.61861 (decimal degrees)

**Primary (NAICS) Category:** Pipeline Transportation of Natural Gas      **Primary NAICS #:** 486210

<b>Classification (SIC) Category:</b>	<u>Natural Gas Transmission</u>	<b>Primary SIC #:</b>	<u>4922</u>		
<b>Briefly discuss the type of business conducted at this site:</b>	<u>The Station receives natural gas via pipeline from upstream sources, compresses it, and then transmits the gas via pipeline to downstream compressor stations.</u>				
<b>Description of Area Surrounding Source:</b>	<input checked="" type="checkbox"/> Rural Area	<input type="checkbox"/> Industrial Park	<input type="checkbox"/> Residential Area	<b>Is any part of the source located on federal land?</b>	<input type="checkbox"/> Yes
	<input type="checkbox"/> Urban Area	<input type="checkbox"/> Industrial Area	<input type="checkbox"/> Commercial Area		<input checked="" type="checkbox"/> No
				<b>Number of Employees:</b>	5
<b>Approximate distance to nearest residence or commercial property:</b>	<u>Approximately 400 feet</u>	<b>Property Area:</b>	<u>18.8 acres</u>	<b>Is this source portable?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?</b>					
<b>NPDES/KPDES:</b>	<input checked="" type="checkbox"/> Currently Hold	<input type="checkbox"/> Need	<input type="checkbox"/> N/A		
<b>Solid Waste:</b>	<input type="checkbox"/> Currently Hold	<input type="checkbox"/> Need	<input checked="" type="checkbox"/> N/A		
<b>RCRA:</b>	<input checked="" type="checkbox"/> Currently Hold	<input type="checkbox"/> Need	<input type="checkbox"/> N/A		
<b>UST:</b>	<input type="checkbox"/> Currently Hold	<input type="checkbox"/> Need	<input checked="" type="checkbox"/> N/A		
<b>Type of Regulated Waste Activity:</b>	<input checked="" type="checkbox"/> Mixed Waste Generator	<input checked="" type="checkbox"/> Generator	<input type="checkbox"/> Recycler	<input type="checkbox"/> Other: _____	
	<input type="checkbox"/> U.S. Importer of Hazardous Waste	<input type="checkbox"/> Transporter	<input type="checkbox"/> Treatment/Storage/Disposal Facility	<input type="checkbox"/> N/A	

## Section AI.2: Applicant Information

**Applicant Name:** ANR Pipeline Company

**Title:** (if individual)

**Mailing Address:** **Street or P.O. Box:** 700 Louisiana Street, Suite 700  
**City:** Houston **State:** TX **Zip Code:** 77002

**Email:** (if individual)

**Phone:**

### Technical Contact

**Name:** Melinda Holdsworth

**Title:** Air Specialist - USNG Air Emissions and Reporting

**Mailing Address:** **Street or P.O. Box:** 700 Louisiana Street, Suite 700  
**City:** Houston **State:** TX **Zip Code:** 77002

**Email:** Melinda\_Holdsworth@tcenergy.com

**Phone:** (832) 320-5665

### Air Permit Contact for Source

**Name:** Melinda Holdsworth

**Title:** Air Specialist - USNG Air Emissions and Reporting

**Mailing Address:** **Street or P.O. Box:** 700 Louisiana Street, Suite 700  
**City:** Houston **State:** TX **Zip Code:** 77002

**Email:** Melinda\_Holdsworth@tcenergy.com

**Phone:** (832) 320-5665

**Section AI.3: Owner Information**

**Owner same as applicant**

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Mailing Address:** **Street or P.O. Box:** \_\_\_\_\_  
**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**List names of owners and officers of the company who have an interest in the company of 5% or more.**

**Name**

**Position**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Section AI.4: Type of Application**

**Current Status:**       Title V    Conditional Major       State-Origin                       General Permit                       Registration                       None

**Requested Action:**       Name Change       Initial Registration       Significant Revision                       Administrative Permit Amendment  
*(check all that apply)*       Renewal Permit       Revised Registration       Minor Revision                       Initial Source-wide Operating Permit  
                                   502(b)(10)Change       Extension Request       Addition of New Facility                       Portable Plant Relocation Notice  
                                   Revision                       Off Permit Change                       Landfill Alternate Compliance Submittal       Modification of Existing Facilities  
                                   Ownership Change       Closure

**Requested Status:**       Title V    Conditional Major       State-Origin       PSD       NSR                       Other: \_\_\_\_\_

**Is the source requesting a limitation of potential emissions?**                       Yes       No

<p><b>Pollutant:</b></p> <p><input type="checkbox"/> Particulate Matter                      _____</p> <p><input type="checkbox"/> Volatile Organic Compounds (VOC)                      _____</p> <p><input type="checkbox"/> Carbon Monoxide                      _____</p> <p><input type="checkbox"/> Nitrogen Oxides                      _____</p> <p><input type="checkbox"/> Sulfur Dioxide                      _____</p> <p><input type="checkbox"/> Lead                      _____</p>	<p><b>Requested Limit:</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p><b>Pollutant:</b></p> <p><input type="checkbox"/> Single HAP                      _____</p> <p><input type="checkbox"/> Combined HAPs                      _____</p> <p><input type="checkbox"/> Air Toxics (40 CFR 68, Subpart F)                      _____</p> <p><input type="checkbox"/> Carbon Dioxide                      _____</p> <p><input type="checkbox"/> Greenhouse Gases (GHG)                      _____</p> <p><input type="checkbox"/> Other                      _____</p>	<p><b>Requested Limit:</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

**For New Construction:**

**Proposed Start Date of Construction:**                      \_\_\_\_\_      **Proposed Operation Start-Up Date:** (MM/YYYY)                      \_\_\_\_\_  
                                  (MM/YYYY)

**For Modifications:**

**Proposed Start Date of Modification:**                      \_\_\_\_\_      **Proposed Operation Start-Up Date:** (MM/YYYY)                      \_\_\_\_\_  
                                  (MM/YYYY)

**Applicant is seeking coverage under a permit shield.**                       Yes       No                      **Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.**

## Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- |  |   |
|--|---|
| <input type="checkbox"/> DEP7007A Indirect Heat Exchangers and Turbines                    | <input type="checkbox"/> DEP7007CC Compliance Certification                                   |
| <input type="checkbox"/> DEP7007B Manufacturing or Processing Operations                   | <input type="checkbox"/> DEP7007DD Insignificant Activities                                   |
| <input type="checkbox"/> DEP7007C Incinerators and Waste Burners                           | <input type="checkbox"/> DEP7007EE Internal Combustion Engines                                |
| <input type="checkbox"/> DEP7007F Episode Standby Plan                                     | <input type="checkbox"/> DEP7007FF Secondary Aluminum Processing                              |
| <input type="checkbox"/> DEP7007J Volatile Liquid Storage                                  | <input type="checkbox"/> DEP7007GG Control Equipment  |
| <input type="checkbox"/> DEP7007K Surface Coating or Printing Operations                   | <input type="checkbox"/> DEP7007HH Haul Roads   |
| <input type="checkbox"/> DEP7007L Mineral Processes  | <input type="checkbox"/> Confidentiality Claim  |
| <input type="checkbox"/> DEP7007M Metal Cleaning Degreasers                                | <input type="checkbox"/> Ownership Change Form  |
| <input type="checkbox"/> DEP7007N Source Emissions Profile                                 | <input checked="" type="checkbox"/> Secretary of State Certificate                            |
| <input type="checkbox"/> DEP7007P Perchloroethylene Dry Cleaning Systems                   | <input checked="" type="checkbox"/> Flowcharts or diagrams depicting process                  |
| <input type="checkbox"/> DEP7007R Emission Offset Credit                                   | <input type="checkbox"/> Digital Line Graphs (DLG) files of buildings, roads, etc.            |
| <input type="checkbox"/> DEP7007S Service Stations   | <input checked="" type="checkbox"/> Site Map  |
| <input type="checkbox"/> DEP7007T Metal Plating and Surface Treatment Operations           | <input checked="" type="checkbox"/> Map or drawing depicting location of facility             |
| <input type="checkbox"/> DEP7007V Applicable Requirements and Compliance Activities        | <input type="checkbox"/> Safety Data Sheet (SDS)  |
| <input type="checkbox"/> DEP7007Y Good Engineering Practice and Stack Height Determination | <input type="checkbox"/> Emergency Response Plan  |
| <input type="checkbox"/> DEP7007AA Compliance Schedule for Non-complying Emission Units    | <input checked="" type="checkbox"/> Other: <input type="text" value="Emission Calculations"/> |
| <input type="checkbox"/> DEP7007BB Certified Progress Report                               |   |

## Section AI.6: Signature Block

**I, the undersigned, hereby certify under penalty of law, that I am a responsible official\*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.**



\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Charles (Brad) Willoughby

\_\_\_\_\_  
Type or Printed Name of Signatory

Sep 8, 2025

\_\_\_\_\_  
Date

\_\_\_\_\_  
Operations Manager

\_\_\_\_\_  
Title of Signatory

\*Responsible official as defined by 401 KAR 52:001.



**ANR PIPELINE COMPANY – MADISONVILLE COMPRESSOR STATION  
TITLE V OPERATING PERMIT RENEWAL APPLICATION**

Appendix B

**Appendix B**

**FACILITY MAP, PLOT PLAN AND PROCESS FLOW DIAGRAM**



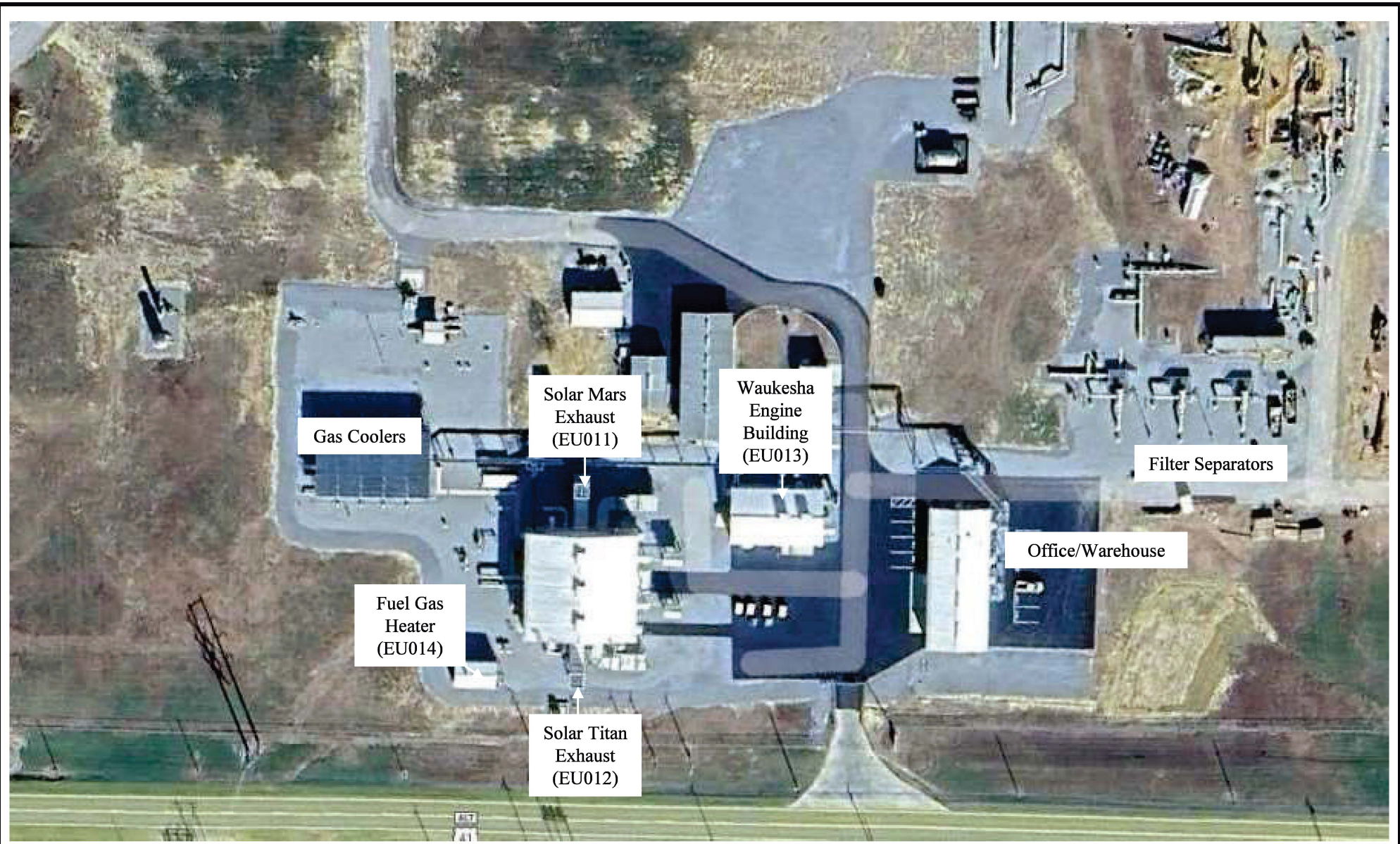


ANR Pipeline Company – Madisonville Compressor Station

Figure 1 – Facility Map



September 2025



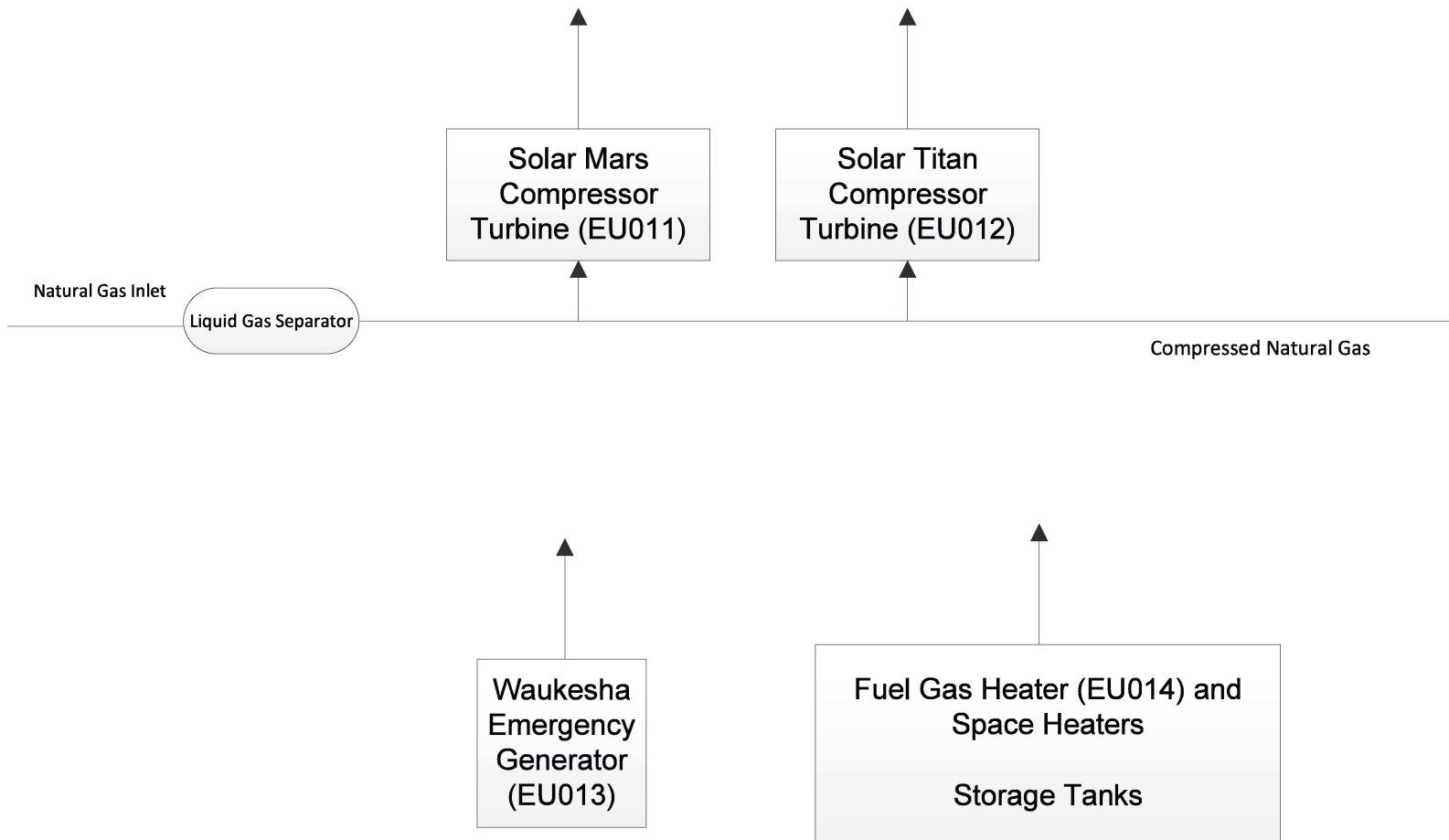
ANR Pipeline Company – Madisonville Compressor Station

Figure 2 - Plot Plan



September 2025

Appendix B  
Figure 3  
ANR Pipeline Company  
Madisonville Compressor Station Process Flow Diagram



**ANR PIPELINE COMPANY – MADISONVILLE COMPRESSOR STATION  
TITLE V OPERATING PERMIT RENEWAL APPLICATION**

Appendix C

**Appendix C**

**EMISSION CALCULATIONS**



ANR Pipeline Company  
 Madisonville Compressor Station  
 Title V Renewal Application

Facility Total PTE

Source	Capacity	Annual Emissions (tpy)							
		NO <sub>x</sub>	CO	CO <sub>2</sub> e	PM <sub>10</sub> /PM <sub>2.5</sub>	VOC	SO <sub>2</sub>	CH <sub>2</sub> O	Total HAP
EU 011 (711) - Solar Mars 100 Turbine	15,473 hp (32 °F)	32.04	78.13	65,156	3.67	6.55	0.40	0.40	0.57
EU 012 (712) - Solar Titan 130 Turbine	22,759 hp (32 °F)	43.75	89.99	88,487	4.99	6.43	0.54	0.54	0.78
EU 013 (713) - Waukesha VGF-L36GL Emergency Generator	880 hp	0.97	1.94	200	0.02	0.49	0.001	0.0922	0.125
EU 014 - Fuel Gas Heater	1.60 MMBtu/hr	0.69	0.58	820	0.05	0.04	0.005	0.0005	0.01
Equipment Leaks (fugitive emissions)				1,144		0.52			0.001
Venting				16,244		7.37			0.03
<b>Facility PTE</b>		<b>77.46</b>	<b>170.63</b>	<b>172,052</b>	<b>8.73</b>	<b>21.39</b>	<b>0.94</b>	<b>1.02</b>	<b>1.52</b>

**ANR Pipeline Company  
Madisonville Compressor Station  
Title V Renewal Application  
Solar Mars 100 Turbine (EU 011)**

Horsepower	15,473 hp (32 °F)
Brake Specific Fuel Consumption	7808 Btu/Bhp-hr (LHV, 32 °F)
Total Heat Input	114.47 MMBtu/hr (LHV, 32 °F) 127.06 MMBtu/hr (HHV, 32 °F) <sup>3</sup>
Maximum Heat Input (at 0 °F)	126.81 MMBtu/hr (LHV, 0 °F) 140.76 MMBtu/hr (HHV, 0 °F) <sup>3</sup>
Operating Hours	8760 hr/yr
Natural Gas Heat Content <sup>5</sup>	1020 Btu/scf
Fuel Consumption	1091.24 MMscf/yr (based on 32°F) 137,999.1 scf/hr (based on 0 °F)
Quantity	1

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	ppmvd@15%O <sub>2</sub>	lb/MMBtu	lb/hr <sup>1</sup>	ton/yr <sup>2</sup>	
NO <sub>x</sub>	15.00	0.060 LHV	7.24	32.04	Vendor Data
CO	25.00	0.061 LHV	7.34	78.13	Vendor Data
CO <sub>2e</sub>		117.1 HHV	14,876	65,156	40 CFR 98 Subpart C
PM <sub>10</sub>		0.0066 HHV	0.84	3.67	AP-42 Table 3.1-2a (4/00)
PM <sub>2.5</sub>		0.0066 HHV	0.84	3.67	AP-42 Table 3.1-2a (4/00)
VOC	5.00	0.007 LHV	0.84	6.55	Vendor Data (20% of UHC) <sup>4</sup>
SO <sub>2</sub> (Maximum Hourly)		0.0571 HHV	7.26		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714 HHV		0.40	0.25 grains S / 100 scf
Formaldehyde		0.00071 HHV	0.09	0.40	AP-42 Table 3.1-3 (4/00)
Total HAPs		0.00103 HHV	0.13	0.57	AP-42 Table 3.1-3 (4/00)

1. Maximum hourly emission rate based on normal operation at 32 °F. Heat input, fuel consumption, and emissions increase as temperature decreases, and for the purpose of this application, hourly emissions are characterized by Solar emissions data for 32 °F.

2. Annual emission rate based on combination of potential operating modes as provided on following page for NO<sub>x</sub>, CO, and VOC. The operating modes are 100 hours at low load (low load hours are based on <50% load), 200 hours of low temperature (<0F) and 200 startups and shutdowns per year. The remainder of the hours per year are based on emissions at normal load (32 °F). Normal operation is considered to be 50%-100% load. All other pollutants are based on horsepower and brake specific fuel consumption at 32 °F.

3. HHV heat input based on HHV=1.11\*LHV

4. VOC based on 20% of vendor data for unburned hydrocarbon.

5. A heat content of 1020 btu/scf was used in the calculations. This is a conservative estimate and is not representative of the site.

**ANR Pipeline Company  
 Madisonville Compressor Station  
 Title V Renewal Application  
 Solar Mars 100 (EU 011) - Emission Rates**

**Emission Rates per Operating Mode**

Operating Mode	Units	NO <sub>x</sub>	CO	VOC
Normal Load @ 32°F <sup>1</sup>	lb/hr	7.24	7.34	0.84
Low Temp (<0 °F) <sup>1</sup>	lb/hr	7.61	7.72	0.88
Low-Load (<40%) <sup>2</sup>	lb/hr	14.00	851.00	48.60
Startup/ Shutdown <sup>3</sup>	lb/event	2.00	40.00	5.00

1. Based on data from Solar Mars 100-16000S Compressor Set Predicted Emission Performance data sheet and the following concentrations:

15 ppm NO<sub>x</sub>; 25 ppm CO; 5 ppm VOC

2. For the purpose of calculating potential annual emissions, non-startup/shutdown operation at <40% load is based on emissions data provided by Solar for 30% load.

3. Based on data from Solar PIL170 for SoLoNO<sub>x</sub> CS/MD Application Nominal Start-up and Shutdown, Natural Gas Fuel, Production Units with Enhanced Emissions Control

**Potential Annual Emissions Per Turbine**

Operating Mode	Operating Time		NO <sub>x</sub>	CO	VOC
	Cycles	hr/yr	ton/yr	ton/yr	ton/yr
Normal Load @ 32 °F		8393	30.38	30.80	3.53
Low Temp (<0 °F)		200	0.76	0.77	0.09
Low-Load (<40%) <sup>1</sup>		100	0.70	42.55	2.43
Startup/ Shutdown	200	67	0.20	4.00	0.50
<b>Total</b>		8,760	32.04	78.13	6.55

1. Historical weather data from the past five years indicates that there are approximately four (4) days per year that have at least one hour with temperature less than 0F. The calculations assume 200 hours per year to be conservative and account for variability in the weather. <https://w2.weather.gov/climate/getclimate.php?wfo=pah>

**Emission Rates During Normal Operation (g/hp-hr)<sup>1</sup>**

Emission Point ID / Model	NO <sub>x</sub>	CO	VOC <sup>2</sup>	SO <sub>2</sub> <sup>3</sup>	PM <sub>10</sub> / PM <sub>2.5</sub>	CH <sub>2</sub> O
EP 011 / Solar Mars 100	0.22	0.22	0.02	0.21	<i>0.02</i>	<i>0.003</i>

1. Based on vendor performance data; values in italics based on AP-42 emission factors.

2. VOC is based on 20 percent of unburned hydrocarbons per Solar Product Information Letter 168.

3. Conservatively based on 20 grains sulfur per 100 standard cubic feet of natural gas for maximum short-term emissions.

**ANR Pipeline Company  
 Madisonville Compressor Station  
 Title V Renewal Application  
 Solar Titan 130 Turbine (EU 012)**

Horsepower 22,759 hp (32 °F)  
 Brake Specific Fuel Consumption 7238 Btu/Bhp-hr (LHV, 32 °F)  
 Total Heat Input 155.46 MMBtu/hr (LHV, 32 °F)  
 172.56 MMBtu/hr (HHV, 32 °F)<sup>3</sup>  
 Maximum Heat Input (at 0 °F) 173.43 MMBtu/hr (LHV, 0 °F)  
 192.51 MMBtu/hr (HHV, 0 °F)<sup>3</sup>  
 Operating Hours 8760 hr/yr  
 Natural Gas Heat Content<sup>5</sup> 1020 Btu/scf  
 Fuel Consumption 1481.99 MMscf/yr (based on 32°F)  
 188,732.6 scf/hr (based on 0 °F)  
 Quantity 1

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	ppmvd@15%O <sub>2</sub>	lb/MMBtu	lb/hr <sup>1</sup>	ton/yr <sup>2</sup>	
NO <sub>x</sub>	15.00	0.060 LHV	9.88	43.75	Vendor Data
CO	25.00	0.061 LHV	10.03	89.99	Vendor Data
CO <sub>2e</sub>		117.1 HHV	20,203	88,487	40 CFR 98 Subpart C
PM <sub>10</sub>		0.0066 HHV	1.14	4.99	AP-42 Table 3.1-2a (4/00)
PM <sub>2.5</sub>		0.0066 HHV	1.14	4.99	AP-42 Table 3.1-2a (4/00)
VOC	5.00	0.007 LHV	1.15	6.43	Vendor Data (20% of UHC) <sup>4</sup>
SO <sub>2</sub> (Maximum Hourly)		0.0571 HHV	9.85		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714 HHV		0.54	0.25 grains S / 100 scf
Formaldehyde		0.00071 HHV	0.12	0.54	AP-42 Table 3.1-3 (4/00)
Total HAPs		0.00103 HHV	0.18	0.78	AP-42 Table 3.1-3 (4/00)

1. Maximum hourly emission rate based on normal operation at 32 °F. Heat input, fuel consumption, and emissions increase as temperature decreases, and for the purpose of this application, hourly emissions are characterized by Solar emissions data for 32 °F.

2. Annual emission rate based on combination of potential operating modes as provided on following page for NO<sub>x</sub>, CO, and VOC. The operating modes are 100 hours at low load (low load hours are based on <50% load), 200 hours of low temperature (<0F) and 200 startups and shutdowns per year. The remainder of the hours per year are based on emissions at normal load (32 °F). Normal operation is considered to be 50%-100% load. All other pollutants are based on horsepower and brake specific fuel consumption at 32 °F.

3. HHV heat input based on HHV=1.11\*LHV

4. VOC based on 20% of vendor data for unburned hydrocarbon.

5. A heat content of 1020 btu/scf was used in the calculations. This is a conservative estimate and is not representative of the site.

**ANR Pipeline Company  
 Madisonville Compressor Station  
 Title V Renewal Application  
 Solar Titan 130 (EU 012) - Emission Rates**

**Emission Rates per Operating Mode**

Operating Mode	Units	NO <sub>x</sub>	CO	VOC
Normal Load @ 32°F <sup>1</sup>	lb/hr	9.88	10.03	1.15
Low Temp (<0 °F) <sup>1</sup>	lb/hr	10.42	10.58	1.21
Low-Load (<40%) <sup>2</sup>	lb/hr	20.97	850.77	9.72
Startup/ Shutdown <sup>3</sup>	lb/event	2.00	43.00	10.00

1. Based on data from Solar Titan 130-23502S Compressor Set Predicted Emission Performance data sheet and the following concentrations:

15 ppm NO<sub>x</sub>; 25 ppm CO; 5 ppm VOC

2. For the purpose of calculating potential annual emissions, non-startup/shutdown operation at <50% load is based on emissions data provided by Solar for 40% load.

3. Based on data from Solar PIL170 for SoLoNO<sub>x</sub> CS/MD Application Nominal Start-up and Shutdown, Natural Gas Fuel, Production Units with Enhanced Emissions Control

**Potential Annual Emissions Per Turbine**

Operating Mode	Operating Time		NO <sub>x</sub>	CO	VOC
	Cycles	hr/yr	ton/yr	ton/yr	ton/yr
Normal Load @ 32 °F		8393	41.46	42.09	4.82
Low-Load (<40%) <sup>1</sup>		200	1.04	1.06	0.12
Low-Load (<40%)		100	1.05	42.54	0.49
Startup/ Shutdown	200	67	0.20	4.30	1.00
<b>Total</b>		8,760	43.75	89.99	6.43

1. Historical weather data from the past five years indicates that there are approximately four (4) days per year that have at least one hour with temperature less than 0F. The calculations assume 200 hours per year to be conservative and account for variability in the weather. <https://w2.weather.gov/climate/getclimate.php?wfo=pah>

**Emission Rates During Normal Operation (g/hp-hr)<sup>1</sup>**

Emission Point ID / Model	NO <sub>x</sub>	CO	VOC <sup>2</sup>	SO <sub>2</sub> <sup>3</sup>	PM <sub>10</sub> / PM <sub>2.5</sub>	CH <sub>2</sub> O
EP 012 / Solar Titan 130	0.20	0.20	0.02	0.20	0.02	0.002

1. Based on vendor performance data; values in italics based on AP-42 emission factors.

2. VOC is based on 20 percent of unburned hydrocarbons per Solar Product Information Letter 168.

3. Conservatively based on 20 grains sulfur per 100 standard cubic feet of natural gas for maximum short-term emissions.

**ANR Pipeline Company  
 Madisonville Compressor Station  
 Title V Renewal Application  
 Waukesha VGF-L36GL Emergency Generator (EU 013)**

Horsepower 880 hp  
 Brake Specific Fuel Consumption 7758 Btu/Bhp-hr (HHV)  
 7013 Btu/Bhp-hr (LHV)  
 Total Heat Input 6.83 MMBtu/hr  
 Operating Hours 500 hr/yr  
 Natural Gas Heat Content 1020 Btu/scf  
 Fuel Consumption 3.35 MMscf/yr  
 6693.2 scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	g/bhp-hr	lb/MMBtu	lb/hr	ton/yr	
NO <sub>x</sub>	2.00		3.88	0.97	NSPS JJJJ Limit
CO	4.00		7.76	1.94	NSPS JJJJ Limit
CO <sub>2e</sub>		117.1	799	200	40 CFR 98 Subpart C
PM <sub>10</sub>		0.010	0.07	0.017	AP-42 Table 3.2-2 (7/00) - 4SLB
PM <sub>2.5</sub>		0.010	0.07	0.017	AP-42 Table 3.2-2 (7/00) - 4SLB
VOC	1.00		1.94	0.49	NSPS JJJJ Limit
SO <sub>2</sub> (Maximum Hourly)		0.0571	0.39		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714		1.22E-03	0.25 grains S / 100 scf
Formaldehyde <sup>1</sup>	0.19		0.37	0.09	Vendor Data
Total HAPs		0.07339	0.50	0.13	AP-42 Table 3.2-2 (7/00) - 4SLB

1. Emission factors generated by EngCalc Program Version 4.0 INNIO Waukesha Gas Engines, Inc; 5/31/2019.

**ANR Pipeline Company  
 Madisonville Compressor Station  
 Title V Renewal Application  
 Fuel Gas Heater (EU 014)**

Heat Input 1.60 MMBtu/hr  
 Operating Hours 8760 hr/yr  
 Natural Gas Heat Content 1020 Btu/scf  
 Fuel Consumption 13.74 MMscf/yr  
 1568.6 scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO <sub>x</sub>	100	0.098	0.16	0.69	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.13	0.58	AP-42 Table 1.4-1 (7/98)
CO <sub>2e</sub>		117.1	187	820	40 CFR 98 Subpart C
PM <sub>10</sub>	7.6	0.007	1.19E-02	0.05	AP-42 Table 1.4-2 (7/98)
PM <sub>2.5</sub>	7.6	0.007	1.19E-02	0.05	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	8.63E-03	0.04	AP-42 Table 1.4-2 (7/98)
SO <sub>2</sub> (Maximum Hourly)		0.0571	0.09		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714		5.00E-03	0.25 grains S / 100 scf
Formaldehyde	0.075	0.00007	1.18E-04	5.15E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	2.96E-03	1.30E-02	AP-42 Table 1.4-3 & 4 (7/98)

**SITEWIDE FUGITIVE EMISSION CALCULATIONS**  
**ANR Pipeline Company**  
**Madisonville Compressor Station**

Annual Hours of Operation: 8760  
 Component Count Buffer: 10%  
 Ideal gas law conversion factor: 379.48 scf/lb-mole  
 Conversion lb to ton: 2000  
 Conversion kg to lb: 2.20

Component Type	Number of Components <sup>1</sup>	Fugitive Emission Factor <sup>2,3</sup> (lb/hr/component)	Emissions								
			Total Hydrocarbons		VOC		HAP <sup>4</sup>		CH4	CO2	CO2e <sup>5</sup>
			(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(tpy)	(tpy)	(tpy)
Valves	744	0.0099	7.3811	32.3291	0.0805	0.3526	0.0001	0.0003	27.7352	0.1562	776.7429
Flange	992	0.0009	0.8529	3.7358	0.0093	0.0407	0.0000	0.0000	3.2050	0.0181	89.7570
Connectors	1457	0.0004	0.6424	2.8138	0.0070	0.0307	0.0000	0.0000	2.4140	0.0136	67.6054
Open-Ended Lines	0	0.0044	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pressure Relief Valves	7	0.0194	0.1358	0.5948	0.0015	0.0065	0.0000	0.0000	0.5103	0.0029	14.2913
Pump Seals	18	0.0053	0.0952	0.4171	0.0010	0.0045	0.0000	0.0000	0.3579	0.0020	10.0225
Other	5	0.0194	0.0970	0.4249	0.0011	0.0046	0.0000	0.0000	0.3645	0.0021	10.2081
Low Continuous Bleed Controllers	0	0.3088	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Continuous Bleed Controllers	0	1.3622	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Intermittent Bleed Controllers	16	0.1044	1.6709	7.3187	0.0182	0.0798	0.0000	0.0001	6.2787	0.0354	175.8403
			<b>Total:</b>			<b>0.52</b>		<b>0.00</b>	<b>40.87</b>	<b>0.23</b>	<b>1144.47</b>

- 1 Number of components based on site-specific component count or similar facility with a 10% buffer for a conservative count.
- 2 Fugitive emission factor from EPA-453/R-95-017, Table 2-4 - November 1995 Guidance - Oil & Gas Production Operations Average Emission Factors' from 'Protocol for Equipment Leak Emission Estimates'.
- 3 Fugitive emission factor for controllers from 40 CFR 98, Subpart W, Table W-1.
- 4 Gas composition of C6+ from site specific analysis. HAP composition is based on GRI-GLYCALC factors for Transmission & Storage Industry Segment.
- 5 40 CFR 98, Subpart A, Table A-1 - CO2e is carbon dioxide equivalent, which is the summation of CO2 (GWP = 1) + CH4 (GWP = 28) + N2O (GWP = 265); Revised 4/25/2024, Effective 1/1/2025.

**GAS ANALYSIS:**

Weight%:	
VOC	1.09%
HAP	0.00%
CH4	85.79%
CO2	0.48%
Gas Molecular Weight:	17.23
Gas Specific Gravity:	0.59
Molecular Weight of Air:	28.97
Density of Gas Sample (lb/scf):	4.55

**ANR Pipeline Company  
 Madisonville Compressor Station  
 Title V Renewal Application  
 Emissions from Venting**

Number of Pneumatic Actuators: 10 per turbine  
 Pneumatic Actuator Vent Rate: 3 scf/hr/actuator

Number of Startup/Shutdown Cycles: 200 per turbine per year  
 Electric Starter Emissions per Startup: 0 scf  
 Blowdown Emissions per Shutdown: 70,481 scf

Number of Turbines 2

Number of Dry Seals: 2 per turbine  
 Dry Seal Vent Rate: 0.5 scf/min/seal

Annual Operating Hours: 8760

Component	Emission Rate									
	Total	CH <sub>4</sub> <sup>2</sup>	CO <sub>2</sub> <sup>2</sup>	CH <sub>4</sub> <sup>3</sup>	CO <sub>2</sub> <sup>3</sup>	CH <sub>4</sub>	CO <sub>2</sub>	CO <sub>2</sub> e <sup>4</sup>	VOC <sup>6</sup>	HAP <sup>7</sup>
<b>Continuous During Operation</b>	<b>scf/hr</b>	<b>scf/hr</b>	<b>scf/hr</b>	<b>lb/hr</b>	<b>lb/hr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>
Pneumatic Actuator (Total for number of units)	57.00	52.52	0.11	2.22	0.01	9.74	0.05	272.71	0.12	0.00
Dry Seals (Total for number of units)	120.00	110.57	0.23	4.68	0.03	20.50	0.12	574.12	0.26	0.00
<b>Intermittent During Startup/Shutdown</b>	<b>scf/event</b>	<b>scf/event</b>	<b>scf/event</b>	<b>lb/event</b>	<b>lb/event</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>
Electric Starter (Total for number of units) <sup>1</sup>	0	0	0	0	0	0	0	0	0.00	0.00
Blowdowns (Total for number of units) <sup>1,5</sup>	140,962	129,889	267	5,498	31	550	3	15,398	6.98	0.03
							<b>Total:</b>	16,244	7.37	0.03

1. Emission rates per event instead of per hour
2. CH<sub>4</sub> and CO<sub>2</sub> emission rates based on 92.14 vol% CH<sub>4</sub> and 0.19 vol% CO<sub>2</sub> in natural gas
3. Conversion based on densities of GHG as provided in 40 CFR 98.233(v)
4. Based on 40 CFR 98 Subpart A Global Warming Potentials
5. Conservative estimate based on 1 blowdown per shutdown. It is not expected that a blowdown will occur after each shutdown.
6. Based on a 0.0127 ratio of VOC to methane as calculated from gas composition.
7. Based on a 0.00006 ratio of hexane to methane as calculated from gas composition

**ANR PIPELINE COMPANY – MADISONVILLE COMPRESSOR STATION  
TITLE V OPERATING PERMIT RENEWAL APPLICATION**

Appendix D

**Appendix D**

**SECRETARY OF STATE DOCUMENTATION**



0566250  
 Michael G. Adams  
 KY Secretary of State  
 Received and Filed  
 5/10/2025 9:02:22 AM  
 Fee receipt: \$15.00

**Commonwealth of Kentucky**  
**Michael G. Adams, Secretary of State**

Michael G. Adams  
 Secretary of State  
 P. O. Box 1150  
 Frankfort, KY 40602-1150  
 (502) 564-3490  
<http://www.sos.ky.gov>

**Annual Report**  
**Online Filing**  
**For the Year 2025**

**ARP**

**Company:** ANR PIPELINE COMPANY  
**Company ID:** 0566250  
**State of origin:** Delaware  
**Formation date:** 8/15/2003 12:00:00 AM  
**Date filed:** 5/10/2025 9:02:00 AM  
**Fee:** \$15.00

**Principal Office**

SUITE 1300 700 LOUISIANA STREET  
 HOUSTON, TX 77002

**Registered Agent Name/Address**

CORPORATION SERVICE COMPANY  
 421 WEST MAIN STREET  
 FRANKFORT, KY 40601

**Current Officers**

President	David Brast	700 Louisiana Street, Suite 1300 Houston, TX 77002
Treasurer	Burton D. Cole	700 Louisiana Street, Suite 1300 Houston, TX 77002

**Directors**

Director	Meera Kothari	700 Louisiana Street, Suite 1300 Houston, TX 77002
Director	Joshua Gibbon	700 Louisiana Street, Suite 1300 Houston, TX 77002
Director	David Brast	700 Louisiana Street, Suite 1300 Houston, TX 77002

County:	POWELL
Business size:	Medium
Business type:	Electric, Gas and Sanitary Services

**Signatures**

<b>Signature</b>	David Brast
<b>Title</b>	President

Division for Air Quality

300 Sower Boulevard  
Frankfort, KY 40601  
(502) 564-3999

### DEP7007M

#### Metal Cleaning Degreasers

- Section M.1: Cold Cleaning Degreasers Only
- Section M.2: Open Top Vapors Degreasers
- Section M.3: Conveyorized Degreasers
- Section M.4: Notes, Comments, and Explanations

#### Additional Documentation

- Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG
- Attach SDS for solvent

**Source:** Madisonville Compressor Station

**KY EIS (AFS) #:** 21- 107-00134

**Permit #:** V-20-028 R1

**Agency Interest (AI) ID:** 44049

**Date:** 5/12/2026

#### Section M.1: Cold Cleaning Degreasers Only

**Emission Unit #:** CC#1

**Emission Unit Name:** Cold Cleaner

**Control Device/Stack #:** N/A

**Manufacturer:** Safety-Kleen

**Model/Serial Number:** Model 250

**Proposed/Actual Date of Construction Commencement (MM/YYYY):** existing

**Type:**     Dip Tank     Spray Sink

**Maximum Operating Schedule:**

1	1	12
Hours/Day	Days/Week	Weeks/Year

**Solvent Information**

Trade Name: PREMIUM SOLVENT  
 Manufacturer: SAFETY-KLEEN  
 Maximum Amount Solvent Used: 5 gal/hr 60 gal/yr  
 Maximum Volatility at 100°F: VOC Vapor Pressure:  
<1.0 mmHg @ 20°C mmHg

**Equipment Design**

Inside dimensions of tank: Width (ft): 2.83 Length (ft): 2.08 Depth (ft): 0.5 Freeboard Height (ft): \_\_\_\_\_  
 If heated, indicate temperature: 103 °F  
 If sprayed, indicate spray pressure: \_\_\_\_\_ psi  
 If agitation is utilized, indicate type:  Pumped  Air  Mechanical  Ultrasonic  
 If drainage board is utilized, indicate type:  Internal  External  
 Is a tank cover utilized?  Yes  No  
 If external, is drainage return used?  Yes  No

**Operating Procedure**

Is degreaser cover closed during degreaser operation?  Yes  No  
 Is degreaser cover closed when degreaser is not in use?  Yes  No  
 Are parts dry before removal from drying rack?  Yes  No

Describe disposal of waste solvent and sludge: Safety Kleen services quarterly.

**Control Devices:**

Identify if any are utilized:  Refrigerated  Water Spray  Carbon Adsorption  Freeboard Ratio greater than or equal to 0.7

Other (specify):



**Section M.2: Open Top Vapor Degreasers**

Emission Unit #: \_\_\_\_\_

Emission Unit Name: \_\_\_\_\_

Control Device/Stack #: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model/Serial #: \_\_\_\_\_

Proposed/Actual Date of Commencement Construction (MM/YYYY): \_\_\_\_\_

Maximum Operating Schedule:

Hours/Day

Days/Week

Weeks/Year

**Solvent Information**

Trade Name: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Maximum Amount Solvent Used: \_\_\_\_\_ gal/hr \_\_\_\_\_ gal/yr

Maximum Volatility at 100°F: \_\_\_\_\_ mmHg

**Equipment Design**

Inside dimensions of tank: Width (ft): \_\_\_\_\_ Length (ft): \_\_\_\_\_ Depth (ft): \_\_\_\_\_ Freeboard Height (ft): \_\_\_\_\_

If sprayed, indicate spray pressure: \_\_\_\_\_ psi

**Type of Safety Switches**

Choose all that apply:

- Condenser flow switch and thermostat       Spray safety switch       Vapor level control thermostat

**Type of Vapor Level Controls**

- Choose all that apply:       Chilled Water or Refrigerant       Condensing Coil       None

Temperature of cooling liquid: (°F) \_\_\_\_\_

**Method of Heating**

Choose all that apply:  Gas  Steam  Electric

Rating: \_\_\_\_\_ Btu/hr kW

**Type of Cleaning Action (choose all that apply)**

Choose all that apply:  Sonic  Spray  Vapor Condensation  Immersion in liquid  Mechanical Mixing

Other (specify):

**Tank Cover (choose all that apply)**

Choose all that apply:  Automatic  Manual  None

Is the tank covered when not in use?  Yes  No

**Describe disposal of waste solvent and sludge:**

**Control Device**

Identify if any are utilized:  Enclosed Design  Carbon Adsorption  Refrigerated Chiller  Freeboard Ratio greater than or equal to 0.75

Other (specify):

**Air Flow**

Are the parts to be degreased moved in and out at a vertical speed of less than 11 ft/min?  Yes  No

What is the exhaust air flow? \_\_\_\_\_ cfm

**Section M.3: Conveyorized Degreasers**

Emission Unit #: \_\_\_\_\_

Emission Unit Name: \_\_\_\_\_

Control Device/Stack #: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model/Serial No.: \_\_\_\_\_

Proposed/Actual Date of Commencement Construction (MM/YYYY): \_\_\_\_\_

Type:             Cold Solvent             Vapor Degreasing

Maximum Operating Schedule:                                   

Hours/Day                                  Days/Week                                  Weeks/Year

**Solvent Information**

Trade Name: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Maximum Amount Solvent Used: \_\_\_\_\_ gal/hr            \_\_\_\_\_ gal/yr

Maximum Volatility at 100°F: \_\_\_\_\_ mmHg

**Equipment Design**

Inside dimensions of tank:            Width (ft): \_\_\_\_\_ Length (ft): \_\_\_\_\_ Depth (ft): \_\_\_\_\_ Freeboard Height (ft): \_\_\_\_\_

Is the tank covered when not in use?             Yes             No

If sprayed, indicate spray pressure: \_\_\_\_\_ psi

Indicate if any of the following are utilized:             Drying Tunnel             Tumbling or Rotating Baskets

Describe the work load design specifications:

**Type of Safety Switches**

Choose all that apply:

- Condenser flow switch and thermostat
- Spray safety switch
- Vapor level control thermostat

**Method of Heating**

Choose all that apply:     Gas     Steam     Electric

Rating: \_\_\_\_\_ Btu/hr    kW

**Control Device**

Identify if any are utilized:     Refrigerated Chiller     Carbon Adsorption

Other: (specify)

**Operating Parameters**

Actual conveyor speed: \_\_\_\_\_ ft/min

Flow rate of exhaust: \_\_\_\_\_ cfm

Maximum vertical conveyor speed at exit or entrance of the degreaser: \_\_\_\_\_ ft/min

Temperature of solvent bath: \_\_\_\_\_ °F    °C

Describe disposal of waste solvent, sludge from the still and solvent from the adsorber:

<b>Section M.4: Notes, Comments, and Explanations</b>

**Section 1 - PRODUCT AND COMPANY IDENTIFICATION****Material Name**

SAFETY-KLEEN PREMIUM SOLVENT (VIRGIN AND RECYCLED)

**Synonyms**

Safety-Kleen Premium Gold Solvent; Safety-Kleen Continued Use Product Solvent (CUP); High Flash Degreasing Solvent; Parts Washer Solvent; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Mineral Spirits

**Product Use**

Cleaning and degreasing metal parts. If this product is used in combination with other products, refer to the Safety Data Sheets for those products.

**Restrictions on Use**

None known.

**MANUFACTURER**Safety-Kleen Systems, Inc.  
2600 North Central Expressway  
Suite 200  
Richardson, TX 75080  
www.safety-kleen.com  
Phone: 1-800-669-5740  
Emergency Phone #: 1-800-468-1760**IN CANADA: SUPPLIER**Safety-Kleen Canada, Inc.  
25 Regan Road  
Brampton, Ontario, Canada L1A 1B2  
  
Phone: 1-800-669-5740  
Emergency # 1-800-468-1760**Issue Date**

September 30, 2016

**Supersedes Issue Date**

June 28, 2016

**Original Issue Date**

January 26, 1995

**Section 2 - HAZARDS IDENTIFICATION****Classification in accordance with paragraph (d) of 29 CFR 1910.1200.**

Flammable Liquids - Category 4

Aspiration Hazard - Category 1

Specific Target Organ Toxicity - Single Exposure - Category 3 (central nervous system)

**GHS Label Elements****Symbol(s)****Signal Word**

Danger

# Safety Data Sheet

Material Name: SAFETY-KLEEN PREMIUM SOLVENT (VIRGIN AND RECYCLED)

SDS ID: 82658

## Hazard Statement(s)

Combustible liquid.  
May be fatal if swallowed and enters airways.  
May cause drowsiness or dizziness.

## Precautionary Statement(s)

### Prevention

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye protection/face protection. Avoid breathing vapor or mist.

### Response

In case of fire: Use Class B/C or Class A/B/C fire extinguisher, carbon dioxide, regular foam, dry chemical, water spray, or water fog for extinction. IF INHALED: Remove person 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/doctor. Do NOT induce vomiting.

### Storage

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

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Other Hazards

None known.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64742-47-8	Petroleum distillates, hydrotreated light	100

## Section 4 - FIRST AID MEASURES

### Inhalation

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

### Skin

IF ON SKIN: Wash with plenty of soap and water. Remove contaminated clothing and wash it before reuse. Get medical attention if irritation develops or persists.

### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

### Ingestion

Aspiration hazard. IF SWALLOWED: Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Immediately call a POISON CENTER or doctor/physician.

### Most Important Symptoms/Effects

#### Acute

May be fatal if swallowed and enters airways. May cause drowsiness or dizziness.

#### Delayed

May cause damage to central nervous system.

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

IF exposed: Immediately call a POISON CENTER or doctor/physician. Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

# Safety Data Sheet

Material Name: SAFETY-KLEEN PREMIUM SOLVENT (VIRGIN AND RECYCLED)

SDS ID: 82658

## Section 5 - FIRE FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Media to use includes Class B/C or Class A/B/C fire extinguisher, carbon dioxide, regular dry chemical, foam, water spray, and water fog.

#### Unsuitable Extinguishing Media

Do not use high-pressure water streams.

### Special Hazards Arising from the Chemical

Combustible liquid and vapor. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Do not allow run-off from fire-fighting to enter drains or water courses. Closed containers may rupture violently when heated. Empty containers may retain product residue including flammable/explosive vapors. Take precautionary measures against static discharge: May cause fire or explosion.

### Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and other organic compounds.

### Advice for firefighters

Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

### Fire Fighting Measures

Keep away from ignition sources - No smoking. Keep unnecessary people away, isolate hazard area and deny entry. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Stay away from the ends of tanks. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Stay upwind and keep out of low areas. Dike for later disposal.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

### Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Do not touch or walk through spilled material. Stop leak if safe to do so. Wear personal protective clothing and equipment. Appropriate engineering controls: Keep unnecessary people away, isolate hazard area and deny entry. Ventilate the area. Avoid breathing vapor or mist. Use foam on spills to minimize vapors. Keep out of water supplies and sewers. Absorb with earth, sand or other non-combustible material and transfer to container. Use non-sparking tools. Large spills: Reduce vapors with water spray. Dike for later disposal.

### Environmental Precautions

Avoid release to the environment.

## Section 7 - HANDLING AND STORAGE

### Precautions for Safe Handling

Keep away from heat, sparks and flame. Use personal protective equipment as required. When transferring product, trucks and tank cars should be grounded and bonded. Do not breathe vapor or mist. Use only outdoors or in a well-ventilated area. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product.

# Safety Data Sheet

Material Name: SAFETY-KLEEN PREMIUM SOLVENT (VIRGIN AND RECYCLED)

SDS ID: 82658

## Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

## Incompatible Materials

Avoid acids, alkalies, oxidizing agents, reducing agents, halogens.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component Exposure Limits

<b>Petroleum distillates, hydrotreated light</b>	<b>64742-47-8</b>
ACGIH:	100 ppm TWA (related to Stoddard solvent )
NIOSH:	350 mg/m <sup>3</sup> TWA (related to Stoddard solvent )
	1800 mg/m <sup>3</sup> Ceiling (15 minutes )
OSHA (US):	500 ppm TWA ; 2900 mg/m <sup>3</sup> TWA (Related to Stoddard solvent )
	100 ppm TWA (Related to Stoddard solvent ) ; 525 mg/m <sup>3</sup> TWA (OSHA (Vacated) )

### ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

### Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

### Individual Protection Measures, such as Personal Protective Equipment

#### Eye/face protection

Wear safety glasses. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Eye wash fountain and emergency showers are recommended. Contact lens use is not recommended.

#### Respiratory Protection

Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

#### Glove Recommendations

Wear appropriate chemical resistant gloves. In case of skin contact: neoprene, nitrile, as well as similar materials in protection gloves; do not use natural rubber.

#### Protective Materials

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, gloves, and lab coat or apron.

## Safety Data Sheet

Material Name: SAFETY-KLEEN PREMIUM SOLVENT (VIRGIN AND RECYCLED)

SDS ID: 82658

<b>Section 9 - PHYSICAL AND CHEMICAL PROPERTIES</b>
---

<b>Appearance</b>	Clear liquid	<b>Physical State</b>	Liquid
<b>Odor</b>	Mild ,hydrocarbon odor	<b>Color</b>	Colorless to pale yellow
<b>Odor Threshold</b>	30 ppm (based on Stoddard Solvent )	<b>pH</b>	Not applicable
<b>Melting Point</b>	-45 F (-43 C )	<b>Boiling Point</b>	350 F (177 C )
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	<0.1 (butyl acetate = 1)	<b>Flammability (solid, gas)</b>	Not available
<b>Autoignition Temperature</b>	480 F (249 C )(minimum)	<b>Flash Point</b>	148 F (64 C )
<b>Lower Explosive Limit</b>	0.7 VOL%	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	5 VOL%	<b>Vapor Pressure</b>	0.2 mm Hg (at 68 F)
<b>Vapor Density (air=1)</b>	5 (air = 1) (approximately)	<b>Specific Gravity (water=1)</b>	0.77 - 0.82 (at 60 F)
<b>Water Solubility</b>	Insoluble	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Not available	<b>Solubility (Other)</b>	Not available
<b>Density</b>	6.4 - 6.7 lb/US gal	<b>VOC</b>	100 WT%; 6.4 to 6.7 LB/US gal; 770 to 800 g/l; As per 40 CFR Part 51.100(s); VOC Vapor Pressure: <1.0 mmHg @ 20°C; Product may or may not be considered photochemically reactive (100% by weight); Consult your state or local air district regulations for location specific information.
<b>Molecular Weight</b>	Not available		
<b>Other Information</b>	No additional information is available.		

<b>Section 10 - STABILITY AND REACTIVITY</b>
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**Reactivity**

No reactivity hazard is expected.

**Chemical Stability**

Stable at normal temperatures and pressure.

**Possibility of Hazardous Reactions**

Will not polymerize under normal temperature and pressure conditions.

**Conditions to Avoid**

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

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## Incompatible Materials

Avoid acids, alkalis, oxidizing agents, reducing agents, halogens.

## Hazardous decomposition products

Not applicable under normal conditions of use and storage. Reference to other sections: Section 5.

## Thermal decomposition products

Burning may produce carbon monoxide and other organic compounds.

## Section 11 - TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

#### Inhalation

May cause respiratory irritation, nausea, loss of appetite, headache, drowsiness, dizziness, disorientation, tremors, lung damage, convulsions, coma.

#### Skin Contact

May cause skin irritation.

#### Eye Contact

No information on significant adverse effects.

#### Ingestion

May cause drowsiness or dizziness, headache, loss of coordination, aspiration hazard.

#### Acute and Chronic Toxicity

##### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

##### Petroleum distillates, hydrotreated light (64742-47-8)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat >5.2 mg/L 4 h

#### Immediate Effects

May cause central nervous system depression. Aspiration may result in lung damage, respiratory tract irritation, May cause skin irritation.

#### Delayed Effects

May cause damage to central nervous system.

#### Irritation/Corrosivity Data

May cause respiratory tract irritation and skin irritation.

#### Respiratory Sensitization

No information available for the product.

#### Dermal Sensitization

No information available for the product.

#### Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

#### Germ Cell Mutagenicity

No information available for the product.

#### Tumorigenic Data

No data available

#### Reproductive Toxicity

No information available for the product.

#### Specific Target Organ Toxicity - Single Exposure

May cause central nervous system depression.

#### Specific Target Organ Toxicity - Repeated Exposure

May cause damage to central nervous system.

#### Aspiration hazard

May be fatal if swallowed and enters airways. May cause lung damage.

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## Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, kidneys, and eye and/or skin disorders may have increased susceptibility to the effects of exposure.

## Section 12 - ECOLOGICAL INFORMATION

### Component Analysis - Aquatic Toxicity

According to the California Code of Regulations, a toxicity to aquatic life, specifically fish, is determined using an acute 96 hour bioassay. A material is non-hazardous if the LC50 is >500 mg/L. This product passed the bioassay and is considered non-hazardous.

### Persistence and Degradability

No information available for the product.

### Bioaccumulative Potential

This material is believed not to bioaccumulate.

### Mobility

Expected to have high mobility in soil.

### Other Toxicity

No additional information is available.

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose of in accordance with all applicable federal, state and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal. This product, if discarded, is not expected to be a characteristic or listed hazardous waste. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

### Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components

## Section 14 - TRANSPORT INFORMATION

### US DOT Information:

**Non-Bulk Packages (less than or equal to 119 gallons):** Not regulated. Shipping Name: Cleaning compounds (Petroleum naphtha) (Not US DOT regulated)

### Bulk Packages

**Shipping Name:** COMBUSTIBLE LIQUID, N.O.S., (Petroleum naphtha)

**Hazard Class:** 3 **UN/NA #:** NA1993 **Packing Group:** III **Required Label(s):** 3

### IATA Information:

**UN#:** Not regulated as a dangerous good

### TDG Information:

**UN#:** Not regulated as a dangerous good

### Additional information

Emergency Response Guide Number: 128: Reference: North American Emergency Response Guide Book.

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## Section 15 - REGULATORY INFORMATION

### U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

### SARA Section 311/312 (40 CFR 370 Subparts B and C)

**Acute Health:** yes **Chronic Health:** yes **Fire:** yes **Pressure:** no **Reactivity:** no

### U.S. State Regulations

None of this product's components are listed on the state lists from MA, MN, NJ or PA

**WARNING!** This product can expose you to chemicals including benzene, dichlorobenzene, ethylbenzene, and naphthalene which are known to the State of California to cause cancer and benzene and toluene which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.gov](http://www.P65Warnings.gov).

### Canada Regulations

This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

### Canadian WHMIS Ingredient Disclosure List (IDL)

The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.

### WHMIS Classification

B3; D2B

### Component Analysis - Inventory

Petroleum distillates, hydrotreated light (64742-47-8)

US	CA
Yes	DSL

### U.S. Inventory (TSCA)

TSCA: All the components of this substance are listed on or are exempt from the inventory.

## Section 16 - OTHER INFORMATION

### NFPA Ratings

Health: 1 Fire: 2 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### Summary of Changes

Revision to meet Canadian WHMIS 2015. Clarification of language in Section 8, Protective Equipment.

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSL - Domestic Substances List; EPA - Environmental Protection Agency; F - Fahrenheit; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NDSL - Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; OSHA - Occupational Safety and

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Health Administration; PEL- Permissible Exposure Limit; RCRA - Resource Conservation and Recovery Act; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; WHMIS - Workplace Hazardous Materials Information System (Canada).

### **Other Information**

#### **Disclaimer:**

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.