AIR EMISSION PERMIT NO. 01300017- 001

IS ISSUED TO

Williams Pipeline Company

WILLIAMS PIPELINE COMPANY - MANKATO TERMINAL
Route 9, Box 137
Mankato, Blue Earth County, Minnesota 56001

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Title V Total Facility Operating Permit	3/19/96
Major Modification	11/08/96

This permit authorizes the Permittee to operate and construct the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit and with all general conditions listed in Minn. R. 7007.0800, subp. 16, which are incorporated by reference. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: State; Syn Min PSD/NSR

Issue Date: May 6, 1997

Expiration: Permit does not expire
All Title I Conditions do not expire.

Michael J. Sandusky
Acting Division Manager
Air Quality Division

for Peder A. Larson
Commissioner
Minnesota Pollution Control Agency

MJS:csa

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(612)296-6300
Outside Metro Area	1-800-657-3864
TTY	(612)282-5332

The rule governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Any requirements which have been determined not to apply are listed in Table A of this permit. The permit shield, however does not apply to: Minn. R. ch. 7030 (Noise Pollution Control).

FACILITY DESCRIPTION:

Williams Pipe Line Company owns and operates this bulk fuels storage and truck loading terminal in Mankato, Minnesota. The facility consists of a truck loading rack and petroleum product storage tanks. A flare will be used to control vapors from the truck loading rack. Currently, a soil vapor extraction system is also located on site.

The facility has proposed federally-enforceable permit conditions (specifically the use of a flare) to avoid major source classification under all federal air permitting programs (40 CFR § 70, 40 CFR § 63, and 40 CFR § 52.210).

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: **Total Facility**

What to do	Why to do it
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Shutdowns: Notify the Commissioner at least 24 hours in advance of shutdown of any process or control equipment if the shutdown would cause an increase in the emission of air contaminants. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 1
Breakdowns: Notify the Commissioner immediately of a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of air contaminants, or as required by Minn. R. 7019.1000 as amended. At the time of notification or as soon thereafter as possible, the permittee shall also notify the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Oral Notification of Deviations Endangering Human Health or the Environment: Within 24 hours of discovery, orally notify the Commissioner of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7007.0800, subp. 6(A)
Discovery of Deviations Endangering Human Health or the Environment Report (written): within two working days after discovery of deviation, submit a written description of any deviation endangering human health or the environment to the Commissioner. Include the following information in this written description: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7007.0800, subp. 6(A)
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not federally enforceable.	Minn. R. 7030.0010 - 7030.0080
Application for Permit Amendment: If you need a permit amendment, submit application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

Record keeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises, to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
The Permittee shall comply with the general conditions.	Minn. R. 7007.0800, subp. 16

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

Subject Item: **SV 001**

Associated Items: EU 001 Truck Loading Rack

What to do	Why to do it
Immediately before the performance test required by 40 CFR Sections 60.503 and 60.8, use Method 21 to monitor for leakage of vapor from all potential sources in the terminal's vapor collection system equipment while a gasoline tank truck is being loaded. Repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test.	40 CFR Section 60.503(b), Minn. R. 7011.1550
Performance Test: due 180 days after Initial Startup or within 60 days of reaching the maximum production rate at which the facility will be operated, whichever is sooner, to demonstrate compliance with the standards in 40 CFR section 60.502(b) and (h).	40 CFR Section 60.503 and 60.8, Minn. R. 7011.1550
Performance Test Pre-test Meeting: due 7 days before Performance Test for total organic compounds.	Minn. R. 7017.2030, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

Subject Item: **EU 001 Truck Loading Rack**

Associated Items: CE 001 Flaring

SV 001

What to do	Why to do it
Total Organic Compounds: less than or equal to 35 milligrams/liter of gasoline loaded.	40 CFR Section 60.502(b), Minn. R. 7011.1550
Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline trucks using the following procedures. The Permittee shall: 1. Obtain the vapor tightness documentation described in Section 60.505(b) for each gasoline tank truck which is to be loaded at the facility. 2. Require the tank identification number to be recorded as each gasoline tank truck is loaded at the facility. 3. Cross-check each tank identification number with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded. 4. Notify the owner or operator of each nonvapor-tight gasoline tank truck loaded at the facility within 3 weeks after the loading has occurred. 5. Take steps assuring that the nonvapor-tight gasoline tank truck will not be reloaded at the facility until vapor tightness documentation for that tank is obtained. 6. Alternate procedures may be used upon application to, and approval by, the Administrator.	40 CFR Section 60.502(e), Minn. R. 7011.1550
The Permittee shall act to assure that loadings of gasoline tank trucks at the facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.	40 CFR Section 60.502(f), Minn. R. 7011.1550
The Permittee shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. This includes training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks.	40 CFR Section 60.502(g), Minn. R. 7011.1550
A pressure measurement device capable of measuring up to 500 mm of water gauge pressure with +/- 2.5 mm of water precision, shall be calibrated and installed on the terminal's vapor collection system at a pressure tap located as close as possible to the connection with the gasoline tank truck.	40 CFR Section 60.503(d)(1), Minn. R. 7011.1550
The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 40 CFR Section 60.503(d).	40 CFR Section 60.502(h), Minn. R. 7011.1550
No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water.)	40 CFR Section 60.502(i), Minn. R. 7011.1550
Inspection: Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this requirement, detection methods incorporating sight, sound, or smell are acceptable.	40 CFR Section 60.502(j), Minn. R. 7011.1550
Recordkeeping and Repair: Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.	40 CFR Section 60.502(j), Minn. R. 7011.1550
The tank truck vapor tightness documentation shall be kept on file at the terminal in a permanent form available for inspection.	40 CFR Section 60.505(a), Minn. R. 7011.1550
The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27.	40 CFR Section 60.505(b), Minn. R. 7011.1550
A record of each monthly leak inspection shall be kept on file at the terminal for at least 2 years and shall include, at a minimum: 1. Date of inspection 2. Findings (no leaks, or nature and severity of leaks) 3. Leak determination method 4. Corrective action (date each leak repaired, reasons for repair interval >15 days) 5. Inspector name and signature	40 CFR Section 60.505(c), Minn. R. 7011.1550
The permittee shall keep documentation of all notifications required under Section 60.502(e)(4) on file at the terminal for at least 2 years.	40 CFR Section 60.505(d), Minn. R. 7011.1550
The Permittee shall keep records of all replacements or additions of components performed on an existing vapor processing system for at least 3 years.	40 CFR Section 60.505(f), Minn. R. 7011.1550
The existing loading rack will be shut down and its removal will start, when the new rack attains normal operation. Removal must be completed within six months of initial startup of the new rack.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

Subject Item: **CE 001 Flaring**

Associated Items: EU 001 Truck Loading Rack

FS 001 Gasoline Service - Valves, Flanges, Pumps, Connectors

What to do	Why to do it
Flares shall be operated at all times when emissions may be vented to them.	Title I Condition: Limit to avoid classification as major source under 40 CFR Section 52.21; to avoid major source classification under 40 CFR Section 70.2; and to avoid major source classification under 40 CFR Section 63.2
Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using an ultraviolet sensor or any other equivalent device to detect the presence of a flame.	Title I Condition: Monitoring of limit used to avoid major source classification under 40 CFR Section 52.21; 40 CFR Section 70.2; and 40 CFR Section 63.2

TABLE B: SUBMITTALS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

Table B lists the submittals you must send to the Commissioner. Table B is divided into two sections, for source-specific submittal requirements and for submittals required of all permittees. Source-specific submittals are further organized as either one-time only or recurrent requirements. You may also be subject to additional reporting requirements contained in the compliance schedule located in Table C of this permit. All submittals must be postmarked or received by the date specified in the table, and certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Submittals which must be provided on standardized forms approved by the Commissioner are noted in Tables B and C.

Send any application for a permit or permit amendment to: Permit Information Coordinator, Permit Section, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4914. Also send the Permit Information Coordinator notices of: accumulated insignificant activities, installation of control equipment, replacement of an emissions unit, and changes that contravene a permit term.

Send all other submittals to: Compliance Tracking Coordinator, Compliance Determination Unit, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup . Submit the name and number of each unit and the actual date of initial startup each unit.	Total Facility
Notification of the Anticipated Date of Initial Startup	due 30 days before Anticipated Date of Initial Startup . Submit the name and number of each unit and the anticipated date of initial startup each unit.	Total Facility
Notification of the Date Construction Began	due 30 days after Start Of Construction . Submit the name and number of each unit and the date construction of each unit began.	Total Facility
Notification of the date of Equipment Removal/Dismantlement	due 15 days after Equipment Removal and/or Dismantlement . Submit the name and number of each unit and the date the unit was removed and/or dismantled.	Total Facility
Performance Test Notification (written)	due 30 days before Performance Test for total organic compounds.	SV001
Performance Test Plan	due 30 days before Performance Test for total organic compounds.	SV001
Performance Test Report - Microfiche Copy	due 105 days after Performance Test for total organic compounds.	SV001
Performance Test Report	due 45 days after Performance Test for total organic compounds.	SV001

TABLE B: RECURRENT SUBMITTALS

05/06/97

Facility Name: Williams Pipeline Co - Mankato Terminal

Permit Number: 01300017 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31.	Total Facility
Compliance Certification	due 30 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner. The report covers all deviations experienced during the calendar year.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 01300017-001
(AQD #1858C)

This technical support document is for all the interested parties of the draft permit and to meet the requirements that have been set forth by Minn. R. 7007.0850, subp.1. The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the draft permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 5171)
Williams Pipeline Co. - Mankato Terminal	Junction of Hwy. 169 & 68
P.O. Box 3448	Route 9, Box 137
Tulsa, Oklahoma 74101	Mankato, MN 56001

1.2. Description Of The Permit Action

1.2.1 <u>Permit Action</u> - Issuance of a State total facility permit for the facility, in accordance with their Title V application. Incorporates construction of a new loading rack equipped with a flare. The old rack will be removed. Emissions will decrease significantly from this modification.

<u>Confidentiality of Information:</u>
The Permittee requested that actual emission data be held confidential. In a letter dated 2/6/97, this request was denied as the Clean Air Act requires that emissions data be held public.

<u>Notes from permit application</u>:
- They are within 50 miles of Iowa.
- Emission units were renumbered - tanks do not receive an EU number, only a tank number, the soil vapor recovery unit is now EU 002.

1.2.2 <u>Applicability of Federal Regulations</u>

Part 52.21 - Major Source Definition - *synthetic minor source*
Williams Pipeline Co. would be considered a major source if it had the potential to emit, including fugitive emissions, of a 100 tons per year or more of any air pollutant. The Permittee will be installing a truck loading rack which includes pollution control equipment, a flare. With operation of the flare, and with fugitive emissions counted, the PTE of VOCs = 74.5 tpy.

Part 60 NSPS

40 CFR 60, Parts K, Ka, Kb- *does not apply*
Tanks were installed between 1947 and 1954. NSPS apply to tanks installed after 6/11/73 and 7/23/84.

40 CFR 60, Part XX - Bulk Gasoline Terminals - *does apply*
§ 60.500 Applicability
(a)...all the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks and
(b) ...construction or modification of which is commenced after December 17, 1980.

Part 63 NESHAPS
NESHAPs do not apply to facilities which limit their HAP emissions to less than 10 tpy for any single HAP and less than 25 tpy for combined HAPs.

Subp. R - Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations) - *does not apply*

§63.420 Applicability.
(a) Exception for bulk gasoline terminals for which...
(a)(2) ...the owner or operator has documented and recorded to the Administrator's satisfaction that the facility is not a major source, or is not located within a contiguous area and under common control of a facility that is a major source, as defined in §63.2 of subpart A of this part.

(b) Exception for pipeline breakout station for which...
(b)(2) ...the owner or operator has documented and recorded to the Administrator's satisfaction that the facility is not a major source, or is not located within a contiguous area and under common control of a facility that is a major source, as defined in §63.2 of subpart A of this part.

The facility has sent in notification (attached) in accordance with 40 CFR 63.420 (a)(2) that they are an area source.

1.2.3 Applicability of State Regulations

Minn. R. 7011.1505 Liquid petroleum and Volatile Organic Liquid Storage Vessels

Subp. 1. PRE-1969 STORAGE VESSELS. There are no standards of performance promulgated in this rule for storage vessels for which construction was commenced prior to July 7, 1969.

All tanks containing these liquids were installed between 1947 and 1954.

Minn. R. 7011.1550 Bulk Gasoline Terminals

40 CFR 60, Part XX is adopted and incorporated by reference.

Minn. R. 7011.0700 Industrial Process Equipment Rule - *does not apply*

This rule only applies to industrial process equipment for which a standard of performance has not been promulgated in a specific rule.

1.2.4 Environmental Review

Environmental review is not required as the facilities actual emissions will be below 100 tons per year for all criteria pollutants.

1.3. Emissions of the Facility and Proposed Modification

Table 1. Total Facility Potential to Emit (PTE) Summary and Attainment Status:

Pollutant	PTE (tons/year)					Attainment?
	EU 1 Rack	EU 2 Clean-up	Tanks	Fugitive	Sum	
Particulate Matter (PM)	0	0	0	0	0	Not Applied
Particulate Matter less than 10 micron (PM_{10})	0	0	0	0	0	Yes
Sulfur Dioxide (SO_2)	0	0	0	0	0	Yes
Nitrogen Oxides (NO_x)	3.684	0	0	0	3.68	Yes
Volatile Organic Compounds (VOC)	32.214	10.95	30.6	0.698	74.46	Yes
Carbon Monoxide (CO)	9.209	0	0	0	9.21	Yes
Lead	0	0	0	0	0	Yes
Hazardous Air Pollutants (combined)	1.546	0.526	1.144	0.034	3.25	Not Applied
Benzene	0.290	0.04	0.198	0.006	0.54	Not Applied
Ethyl Benzene	0.032	0.011	0.022	0.001	0.06	Not Applied
Hexane	0.515	0.175	0.352	0.011	1.05	Not Applied
Toluene	0.419	0.142	0.286	0.009	0.86	Not Applied
2,2,4 Trimethylpentane	0.258	0.088	0.176	0.006	0.53	Not Applied
Xylenes	0.161	0.055	0.110	0.003	0.33	Not Applied

Table 2. Facility Classification

Classification (put x in appropriate box)	Major	Synthetic Minor	Minor	N/A
Prevention of Significant Deterioration		X		
Non Attainment Area (list pollutant)				X
Operating Permit Program		X		

2. Regulatory and/or Statutory Basis of Emission Limit

Summary of Emission Limit and Regulatory and/or Statutory Basis of the Emission Limit

Stack/Vent I.D.: 001 Emission Unit: 001 - Loading Rack
Emission Limit and/or Special Conditions: NSPS for Bulk Gasoline Terminals, Subp. XX
Factual and legal basis for above: Applies to facilities constructed after 12/17/80.
Comments: CD Forms attached state all the NSPS condition and their bases. A performance test will be required to show compliance with NSPS requirements.

Emission Limit and/or Special Conditions: Operate flare at all times when loading rack is operational.
Factual and legal basis for above: The flare is necessary in order to be able to show compliance with the NSPS requirements and to avoid major source classification under PSD/NSR, Part 63 and Part 70. Use of the flare is the basis for calculations in the permit application.
Comments: Even though the NSPS incorporates VOC limits, and thereby limits HAPS, the limit must be considered as a Title I limit. If they do not meet the limit set in the NSPS, they would possibly be violating PSD, Part 70 and Part 63 and these must be listed as applicable requirements.

Emission Limit and/or Special Conditions: UV monitor installed on flare
Factual and legal basis for above: It is not unlikely that the flare would shut off, therefore, as use of the flare is needed in able to show compliance with permit limits, there is a need for monitoring to ensure that the flame is operational.
Comments: UV monitor for the pilot light flare, automatically shuts off loading if pilot goes out. However, operator can manually bypass system, but would notify activity as a shutdown/breakdown. Temperature monitoring is not possible on this type of flare.

Emission Calculation Discussion:
AP-42 Chapter 5.2 Transportation and Marketing of Petroleum Liquids

1. Loading losses are the primary source of evaporative emissions. Emissions from loading petroleum liquid can be estimated using the following expression:

$L_L = 12.46\ (SPM/T)$ where: L_L = Loading loss in pounds per 1000 gallons of liquid loaded
S = saturation factor = 0.6 for submerged loading with dedicated normal service
P = true vapor pressure of liquid loaded (psia)
M = molecular weight of vapors
T = temperature of bulk liquid loaded, °R

Example for RVP 10 Gasoline Loading: $L_L = 12.46\ (0.6)(3.8607)(66)/(44.72 + 460) = 3.774$
Apply control efficiency = > 3.774 (1 - 0.967) = 0.1245
Total loading losses = > 0.1245 lb/10^3 gal x 220,584 x 10^3 gal = 27,473.7 lb = 13.74 tons
(spreadsheet value = 13.69 tpy, differences probably due to rounding, significant digits)

Spreadsheet is attached which has summary tables for different materials.

2. However, there is an underlying applicable requirement, the NSPS for Bulk Gasoline Terminals that limits VOC emissions to 35 mg/l of VOC per liter of gasoline loaded.

35 mg/l x 3.7854 l/gal x 1 g/1000 mg x 1kg/1000g x 2.2046 lb/ kg = 0.00029 lb/gal
0.00029 lb/gal x 220,584,000 gallons = 64,429.3 lb = 32.21 tons
[The Permittee has requested that 32.21 tons per year be the PTE for the loading rack. This is also less ambiguous, as there are 5 different materials loaded at the facility and this limit applies to each]

3. Hazardous Air Pollutants
Gasoline Distribution Industry (Stage 1) - Background Information for Proposed NESHAP
The vapor profile of normal gasoline is:

Pollutant	HAP to VOC Ratio
Hexane	1.6
Benzene	0.9
Toluene	1.3
2,2,4 Trimethylpentane	0.8
Xylenes	0.5
Ethylbenzene	0.1
Total HAPs (not a sum)	4.8

These ratios have been applied to the allowable VOC emissions to determine the allowable HAP emissions.

Summary of Emission Limit and Regulatory and/or Statutory Basis of the Emission Limit

Stack/Vent I.D.: NA Emission Units: Tanks 001 - 019
Emission Limit and/or Special Conditions: None.
Factual and legal basis for above: The tanks were installed before there were any standards of performance, either state or federal.
Comments: Emissions were calculated using the Tanks Program 2.0. All inputs were consistent with the permit application.

Summary of Emission Limit and Regulatory and/or Statutory Basis of the Emission Limit

Stack/Vent I.D.: 002 Emission Unit: Soil Vapor Extraction Unit
Emission Limit and/or Special Conditions: None - VOC emissions only
Factual and legal basis for above: Not a source of PM emissions.
Comments: The soil vapor extraction unit was first operated on 5/19/95. The source of power for the blower is electricity. The current maximum potential to emit is 60 lbs/day (yearly average is 57 lb/day). This is considered a conservative number, as the concentration of VOC-containing materials in the soil should continue to decrease. Data on the emission rate is attached. Interestingly, winter extraction rates tend to be higher as the frozen ground does not allow the infiltration of fresh air to the system and the water table is lower. Therefore, remediation is more focused.

- 60 lb/day x 365 days /2000 lb/ton = 10.95 tons of VOC per year = PTE
- Benzene (sample) = 0.22 lb/day (yearly average) x 365 days / 2000 lb/ton = 0.04 tons of Benzene per year = PTE
- Other HAPs are determined from the vapor profile of normal gasoline as stated in the loading rack section:

Pollutant	%HAP to VOC Ratio	HAPs - tpy
Hexane	1.6	0.175
Benzene	0.9	0.011*
Toluene	1.3	0.142
2,2,4 Trimethylpentane	0.8	0.088
Xylenes	0.5	0.055
Ethylbenzene	0.1	0.011
Total HAPs (not a sum)	4.8	0.526

* actual sample data available and used

Dan Berg is the project engineer in Hazardous Waste working with the Williams Pipeline Co. terminals. They compare the emissions with the significant emission rates, do modeling if they exceed these rates. They are still reviewing the investigation, but don't anticipate any additional remediation activities beyond that which is installed that will result in air emissions.

Summary of Emission Limit and Regulatory and/or Statutory Basis of the Emission Limit

Stack/Vent I.D.: NA Emission Unit: Fugitive Emissions from Flanges, etc.
Emission Limit and/or Special Conditions: None
Factual and legal basis for above: Fugitive emissions must be considered in determining the PTE.
Comments: Form EC-14 attached. Emission Factors taken from API publication #4588 *Development of Fugitive Emission Factors and Emission Profiles for Petroleum Marketing Terminals.* .

3. Conclusion

Based on the information provided by Williams Pipeline Company, the MPCA has reasonable assurance that the proposed modification and operation of the emission facility, as described in the Air Emission Permit No. 01300017-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Attachments:	Need further information?
1. NESHAP notification 2. GI forms for general information on emission units and stacks. 3. GI-07 Facility Emission Summary 4. Compliance Demonstration (CD) Forms 5. Emission Calculation Information 6. Print-out of Tanks 2.0	Permit Engineer: Bonnie J. Nelson, P.E. Telephone No.: (612)282-5846