

AIR EMISSION PERMIT NO. 14500016- 001

IS ISSUED TO

Tesoro Refining and Marketing Company

Tesoro Refining and Marketing Company - Sauk Centre Terminal
1833 Beltline Road
Sauk Centre, Stearns County, MN 56378

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
Total Facility Operating Permit	6/15/96

This permit authorizes the permittee to operate 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. 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 are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Part 70/Major for NSR/Limits to avoid Part 63

Issue Date: April 4, 2002

Expiration: April 4, 2007
All Title I Conditions do not expire

Ann M. Foss
Major Facilities Section Manager
Majors and Remediation Division

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

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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	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules 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. Certain requirements which have been determined not to apply are listed in Table A of this permit.

Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements. The permit shield is not intended to allow you to deviate from permit conditions without obtaining the required prior approvals.

FACILITY DESCRIPTION:

The Permittee owns and operates a bulk terminal for petroleum products, primarily unleaded gasoline, No. 1 and No. 2 fuel oils, diesel fuels and ethanol. The facility consists of product storage tanks and a truck-loading rack. The terminal receives petroleum products through a pipeline distribution network. Products are shipped out by tank truck to retailers and bulk stations. Product transfer from refineries is continuous. Volatile organic compound (VOC) emissions result primarily from loading trucks. Some VOC emissions also are emitted from storage tank losses. Allowable VOC emissions are above major source threshold amounts for New Source Review. Hazardous Air Pollutant (HAP) emissions are below major source thresholds. Gasoline throughput will be limited to 132,000,000 gallons per year.

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal

Permit Number: 14500016 - 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. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	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
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
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
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal

Permit Number: 14500016 - 001

Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
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)
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
Application for Permit Amendment: If a permit amendment is needed, submit an 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
Application for Permit Reissuance: due 180 days before expiration of existing permit.	Minn. R. 7007.0400, subp. 3
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)
Recordkeeping: 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 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)
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 enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Emission 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.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal

Permit Number: 14500016 - 001

Subject Item: EU 001 Truck Loading Rack**Associated Items:** SV 001 Truck Loading Rack

What to do	Why to do it
Process Throughput: less than or equal to 1.32E+8 gallons/year using 12-month Rolling Sum to be determined by the 15th day of each month for the previous 12-month period.	Title I Condition: Limit taken to avoid major source classification under 40 CFR Section 63.2
Daily Recordkeeping: Maintain records of gallons of gasoline purchased daily.	Title I Condition: Monitoring of limit taken to avoid major source classification under 40 CFR Section 63.2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal

Permit Number: 14500016 - 001

Subject Item: TK 006 Tank 7 - LS #1 Oil

What to do	Why to do it
The storage vessel shall be equipped with a fixed roof in combination with an internal floating roof meeting the requirements of 40 CFR Section 60.112b(a)(1).	40 CFR Section 60.112b(a); Minn. R. 7011.1520(C)
Visually inspect the internal floating roof and the primary seal at least once every 12 months after initial fill. If the internal floating roof is not resting on the surge of the VOL inside the tank, or there is liquid accumulated on the roof, or the seal is detached or there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the tank from service within 45 days.	60.113ba2
Keep a record of each inspection containing the date of inspection, and observed condition of each component (seals, internal floating roof and fittings).	60.115b2
Deviations: If any of the conditions listed in 60.113b(a)(2) are detected during the annual visual inspection, a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the tank, nature of the defects, date the storage vessel was emptied or the date the repair was made.	60.115b3
Recordkeeping: Maintain records showing the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of the VOL during the respective storage period, calculated as described in 40 CFR Section 116b(e).	40 CFR Section 60.116b(c); Minn. R. 7011.1520(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal
Permit Number: 14500016 - 001

Subject Item: TK 009 Tank 51- Ethanol

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity. These records shall be maintained for the life of the source.	40 CFR Section 60.116b(b); Minn. R. 7011.1520(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal
Permit Number: 14500016 - 001

Subject Item: TK 011 Tank 52 - Ethanol

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity. These records shall be maintained for the life of the source.	40 CFR Section 60.116b(b); Minn. R. 7011.1520(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal
Permit Number: 14500016 - 001

Subject Item: TK 012 Tank 53 - Ethanol

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity. These records shall be maintained for the life of the source.	40 CFR Section 60.116b(b); Minn. R. 7011.1520(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal
Permit Number: 14500016 - 001

Subject Item: **TK 013 Tank 54 - Ethanol**

What to do	Why to do it
Recordkeeping: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity. These records shall be maintained for the life of the source.	40 CFR Section 60.116b(b); Minn. R. 7011.1520(C)

TABLE B: SUBMITTALS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal
Permit Number: 14500016 - 001

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: RECURRENT SUBMITTALS

04/04/02

Facility Name: Tesoro Sauk Centre Terminal

Permit Number: 14500016 - 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. The first 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. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	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, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX MATERIAL

Facility Name: Tesoro Refining and Marketing Company - Sauk Centre Terminal

Permit Number: 14500016-001

APPENDIX I

Insignificant Activities and General Applicable Requirements

The table below lists the insignificant activities that are currently at the facility and their associated general applicable requirements.

Minn. R. 7007.1300, subp.	Rule Description of the Activity	General Applicable Requirement
4(B)	Potential emissions of 2.28 pounds per hour or actual emissions of one ton per year for particulate matter, particulate matter less than ten microns, nitrogen oxide, sulfur dioxide, and VOCs. <i>The facility has several tanks at the facility which are considered insignificant sources. The combined PTE of these tanks is less than 2 tpy of VOCs.</i>	Minn. R. 7011.2300

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp. 2. In addition, this permit specifically prohibits the Permittee from making any modifications that would make the source major under NSR. The following table is a listing of the insignificant activities that the Permittee is somewhat likely to add and their associated applicable requirements.

Minn. R. 7007.1300, subp.	Rule Description of the Activity	General Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane.	Minn. R. 7011.0510/0515

Minn. R. 7007.1300 , subp.	Rule Description of the Activity	General Applicable Requirement
3(H)	Miscellaneous:	
	1. total usage of less than 200 gallons of VOC (including hazardous air pollutant-containing VOC) combined in any consecutive 12 months period at a stationary source;	Minn. R. 7011.0710/0715 OR Minn. R. 7011.0105/0110
	3. equipment used for hydraulic or hydrostatic testing;	Minn. R. 7011.0710/0715
	4. brazing, soldering or welding equipment;	Minn. R. 7011.0510/.0515, Minn. R. 7011.0610 and Minn. R. 7011.0710/0715 (PM and opacity)
	5. blueprint copiers and photographic processes;	Minn. R. 7011.0105/0110 (opacity)
	8. cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners.	Minn. R. 7011.0510/.0515, Minn. R. 7011.0610 and Minn. R. 7011.0710/0715 (PM and opacity)
3(J)	Fugitive Emissions from roads and parking lots.	Minn. R. 7011.0150 (PM)
3(K)	Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source, such as spray painting of buildings, machinery, vehicles, and other supporting equipment.	Minn. R. 7011.0710/0715 (VOC)

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 14500016-001

This technical support document is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 5171)
Mr. Jeff Baker Supervisor, Environmental Compliance and Remediation Tesoro Refining and Marketing Company 3450 South 344 th Way, Suite 100 Auburn, WA 98001-5931 (253) 896-8700; (253) 896-8863 fax	Sauk Centre Terminal 1833 Beltline Rd P.O. Box 71 Sauk Centre, MN 56378 Stearns County Ms. Barbara Moffitt, Terminal Manager (320) 352-2239

1.2. Description of the facility

Tesoro Refining and Marketing Company owns and operates a bulk terminal for petroleum products, primarily unleaded gasoline, No.1 and No. 2 fuel oils, and diesel fuels. The facility consists of product storage tanks and a truck loading rack. The terminal receives petroleum products through a pipeline distribution network. Petroleum products are shipped out by tank truck to retailers and bulk stations. Product transfer from refineries to the terminal occurs on a continuous basis. The facility's operating schedule is 24 hours per day and 7 days per week.

Volatile organic compound (VOC) emissions result primarily from loading trucks and from storage tank losses. Actual VOC emissions are less than the major source threshold of 100 tpy; however, potential (and allowable) VOC emissions exceed the major source threshold. Therefore, the terminal will receive a Part 70 permit. The terminal is not a major source of HAP emissions, since its actual and potential HAP emissions, as limited in the permit, are less than major source thresholds of 10 tpy for a single HAP and 25 tpy for combined HAPs. Gasoline throughput will be limited to 132,000,000 gallons/yr, no limit is placed on distillate throughput.

A Fugitive Emissions Control Plan was submitted 9/30/92 in accordance with Air Emission Permit 772D-92-OT-2.

1.3 Description of any changes allowed with this permit issuance

This facility was previously owned and operated by Amoco Oil Company.

Permit Action Number:
Date: 1/20/2004

1.4 Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit.

Permit Number and Issuance Date	Action Authorized
04500004-003 May 25, 1995	Installation and operation of new loading rack and new slop oil tank. Existing loading rack removed.
772D-87-OT-1 2/27/87	Total facility permit for 7 tanks, and 2-bay loading rack. T6 (vp<2.5 psia) and T7 (vp < 1.5 psia), or install floating roof
772D-92-OT-2 6/30/92	Total facility permit for 7 tanks and 2-bay loading rack. T4 modified to add internal floating roof but not considered NSPS modification. No other limits
772D-92-OT-2, Amend. 1, 5/20/93	Added Tanks 51 and 52 for ethanol storage to permit (existing, never previously permitted) 40 CFR 60.116b – maintain dimensions for life of source
Insignificant Mod. 6/1/93	Added Tanks 53 and 54 for ethanol storage (existing, never previously permitted) 40 CFR 60.116b will apply

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

ID #	SV#	Emission Unit Description	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Pb tpy	Single HAP (Hexane) tpy	All HAPs tpy
TK001		Tank 1 – Gasoline						1.22		0.01	0.06
TK002		Tank 2 – No.2 oil						0.36		0.04	0.10
TK003		Tank 3 – ULR						1.74		0.02	0.06
TK004		Tank 5 – LS Furnace Oil						1.59		0.02	0.05
TK005		Tank 6 – Diesel						0.18		0.02	0.05
TK006		Tank 7 – LS #1 Oil						0.09		0.02	0.05
TK007		Fuel Additive – IA						-		-	-
TK008		Gas Additive – IA						-		-	-
TK009		Tank 51 – Ethanol						0.15		0	0
TK010		Tank 4 – Gasoline						1.80		0.02	0.06
TK011		Tank 52 – Ethanol						0.15		0	0
TK012		Tank 53 – Ethanol						0.15		0	0
TK013		Tank 54 - Ethanol						0.15		0	0
EU001	001	Loading Rack						234.49		3.04	7.13
FS001		Equipment Fugitive						0.21		0.003	0.01
FS002		Transport Trucks						2.06		0.003	0.06

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Pb tpy	Single HAP Tpy	All HAPs tpy
Total Facility Limited Potential Emissions						244.34		3.19	7.63
Total Facility Actual Emissions						90.51		1.17	2.83

Permit Action Number:
Date: 1/20/2004

Permit Action Number:
Date: 1/20/2004

Table 2. Facility(TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)	VOC		All other
NAAR (list pollutant)			
Part 70 Permit Program (list pollutant)	VOC	HAPs	All other

* Refers to potential emissions that are less than those specified as major by 40 CFR 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70.

2. Regulatory Overview of Facility

EU, GRP, or SV #	Applicable Regulations	Comments:
EU001	40 CFR part 60, subp. XX Minn. R. 7011.1550	Standards of Performance for Bulk Gasoline Terminals (constructed after 12/17/80). Not applicable as loading rack installed in 1954.
EU001	40 CFR part 63, subp R, Minn. R. 7011.7180	NESHAPs for Gasoline Distribution Facilities. Not Applicable. This facility has accepted conditions which limit its potential to emit HAPS to less than the threshold which defines a major source for HAPs. A gasoline throughput limit of 132,000,000 gallons has been applied. This also limits HAP emissions from the facility to area-wide levels.
TK005 [Tes T6]	Minn. R. 7011.1505, subp. 2(C)	Standards of Performance for Storage Vessels: Tank fits applicability determination, but no applicable requirements as vapor pressure is less than 2.5 psia.
TK006 [Tes T7]	40 CFR pt. 60, subp. Kb	Standards of Performance for Storage Vessels: Applies to tanks constructed between 6/11/73 and 5/19/78, greater than 40,000 gallons. NSPS modification in 1976, 319,200 gallons. Vapor pressure is less than 1.5 psia
TK010 [Tes T4]	40 CFR pt. 60, subp Ka, Minn. R. 7011.1505, subp. 3(C) – DOES NOT APPLY	Standards of Performance for Storage Vessels for Petroleum Liquids, Standards of Performance for Volatile Organic Liquid Storage Vessels. Originally installed in 1954. Modification in 1976 to add an internal roof. Since the cost of this was less than 50% of tank replacement and VOC emissions were reduced it did not constitute a NSPS modification. 924,000 gallons.
TK009, 011 – 013 Ethanol [Tes T51- 54]	40 CFR pt. 60, subp Kb	Standards of Performance for Storage Vessels for Petroleum Liquids, Standards of Performance for Volatile Organic Liquid Storage Vessels. Tanks were at facility but not used and permitted until 1992 (009 and 011) and 1997 (012 and 013), 16,800 gallons each. Need to maintain dimensions.
Total Facility	Title I Condition: Limit to avoid major source status under 40 CFR pt. 63	The facility has accepted a gasoline throughput limit of 132,000,000 gal/yr to ensure they are not a major source of HAPs. They will maintain throughput records.

Fuel Oil #2 = 0.0043 psia max

Ethanol = 0.36 psia avg, 0.44 psi max

Permit Action Number:

Date: 1/20/2004

3. Technical Information - Emission Calculations are Attached to this TSD.

Insignificant Activities:

Permittee has calculated insignificant activities as less than 2.0 tons per year combined. Based upon tank size and liquids stored, this result is consistent with other tank calculations. Insignificant activities are listed in Appendix I of the permit.

Loading Rack:

The loading rack was constructed prior to the NSPS. Therefore, it is not subject to any standards. Minn. Standards of Performance, the Industrial Process Equipment Rule would be the only possible requirement. However, it only regulates PM, this emission unit emits VOC at ambient temperatures.

Throughput Limit: The facility has accepted a gasoline throughput limit of 132,000,000 gal/yr. The facility is still a major source for PSD, but it is not a major source for HAPs.

- HAP emissions are limited via the gasoline throughput limit based upon knowledge of the different HAPs that are contained within fuel.
 - At 244.43 tpy VOC, the individual HAP would be 3.15 tpy and combined HAP would be 7.63 tpy.

Gasoline Loading

At a capacity of 132,000,000 gallons of gasoline loaded, the PTE of VOCs is:

$$132,000,000 \text{ gal/yr} \times L = 132,000,000 \times 3.5451 \text{ lb/1000 gallons loaded} = 467,953 \text{ lb/yr} = \mathbf{233.98 \text{ tpy VOC}}$$

$$L \equiv \frac{\text{lb}}{1,000 \text{ gallons loaded}} = 12.46 \frac{(SPM)}{(T + 460)}$$

where: $S \equiv$ saturation factor = .6 (AP-42 Table 5.2-1, submerged loading)
 $P \equiv$ true vapor pressure in psia = 3.6026 (AP-42 Table 7.1-2)
 $M \equiv$ molecular weight of vapors = 66 lb/lb mole (AP-42 Table 7.1-2)
 $T =$ temperature = 41.42 deg F.

Distillate Loading

Nominal distillate loaded in one year = 150,000,000 gallons

Determine Loading Loss (L):

$$L \equiv \frac{\text{lb}}{1,000 \text{ gallons loaded}} = 12.46 \frac{(SPM)}{(T + 460)} = 0.00678 \text{ lb/1000 gal}$$

where: $S \equiv$ saturation factor = .6 (AP-42 Table 5.2-1, submerged loading)
 $P \equiv$ true vapor pressure in psia = 0.0035 (AP-42 Table 7.1-2)
 $M \equiv$ molecular weight of vapors = 130 lb/lb mole (AP-42 Table 7.1-2)
 $T =$ temperature = 41.42 deg F
 $150,000,000 \text{ gal} \times 0.0068 \text{ lb/gal} = 1017.58 \text{ lb/yr} = \mathbf{0.51 \text{ tpy}}$

Sum = 233.98 tpy + 0.51 tpy = 234.49 tpy VOC

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Truck Fugitive Emissions

PTE loss x 0.0088 = 4117.9799 lb/yr = **2.06 tpy VOC**

Piping Fugitive Emissions

EPA Bulletin 453/R-95-017 Protocol for Equipment Leak Emission Estimates (November 1995) estimates the quantity of VOC emissions from petroleum facilities based on the number of valves, pumps, fittings and "other" components at a facility.

Component	Component Count	Emission Factor lb/hr•component	VOC Emissions (tons/yr)
Valves, lt liquid	72	0.000095	0.030
Valves, hvy liquid	83	0.000095	0.035
Pump seals, lt liquid	7	0.001190	0.036
Pump seals, hvy liquid	7	0.001190	0.036
Fittings	960	0.000018	0.076
Other	10	0.000290	0.013
		Total	0.213

4. Conclusion

Based on the information provided by Tesoro Refining and Marketing Company (previously submitted by Amoco Oil Company) the MPCA has reasonable assurance that the proposed operation of the Sauk Centre terminal, as described in the Air Emission Permit No. 14500016-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:

Bonnie J. Nelson, Permit Engineer

Attachments:

GI forms for general facility information
Draft Permit
Emissions Calculations

Permit Action Number:

Date: 1/20/2004