

AIR EMISSION PERMIT NO. 05300844-002
Major Amendment

IS ISSUED TO

The Toro Company
THE TORO COMPANY - LYNDAL
8111 Lyndale Avenue South
Bloomington, Hennepin County, MN 55420

The emission units, control equipment and emission stacks at the stationary source authorized in this draft/proposed permit amendment are as described in the Permit Applications Table.

This draft/proposed permit amendment supersedes Air Emission Permit No. 05300844-001, and 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 draft/proposed 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 draft/proposed permit are as defined in the state air pollution control rules unless the term is explicitly defined in the draft/proposed permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the draft/proposed permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such as are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

Draft/proposed permit Type: Federal Permit; Pt 70/Limits to Avoid NSR; Limits to Avoid NSR
Operating Permit Issue Date: 09/18/2000
Major Amendment Issue Date: May 20, 2010
Expiration Date: 09/18/2005* – Title I Conditions do not expire.

* The Permittee may continue to operate this facility after the expiration date of the permit, per the provision under Minn. R. 7007.0450, subp. 3. (Title V Reissuance Application was received 03/22/2005.)

Don Smith, P.E., Manager
Air Quality Permits Section
Industrial Division

for Paul Eger
Commissioner
Minnesota Pollution Control Agency

Permit Applications Table

Permit Type	Application Date	Permit Action
Total Facility Operating Permit	Original Application October 1995; Application Revisions November 1998	001
Major Amendment	09/17/08	002

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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. 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.

FACILITY DESCRIPTION:

According to the company, the Bloomington facility is used as Toro's research and development facility. This facility does not manufacture or fabricate any products for market. The primary processes located at the Bloomington site include engine testing, spray painting and coating. During the site visit, MPCA staff witnessed a wide variety of testing activities including endurance and development testing as well as safety testing and stress testing.

The primary source of air emissions at this facility is engine testing. Test cells are used to conduct endurance testing, developmental testing and environmental testing on engines used in Toro's products. Testing can take place in any number of the installed test cells and different tests can be carried out within the same test cell at the same time. Testing can also take place at individual workstations within the experimental test area.

Other sources of air emissions are a paint booth used to paint prototype parts and a stress coat paint booth used to coat parts with a stress sensitive paint prior to stress testing. The paint booths each have a spray gun and spray cans are also used. The amount of paint used annually is very small and these units are considered insignificant activities required to be listed. The primary pollutants of concern are carbon monoxide (CO), volatile organic carbon (VOCs), nitrogen oxides (NO_x), sulfur dioxide (SO₂) and hazardous air pollutants (HAPs).

Total Facility Permit PER001

This permit was written as a Flex Cap permit for the test cells. For Toro, this means that they may change, add, or delete any of the test cells as long as they abide by the fuel usage limits and all other permit conditions.

The only pollution control equipment at this facility was a bank of mat or panel filters on the paint booth. The facility used only gasoline or diesel fuel in its engines and the facility proposed fuel usage limits to avoid New Source Review and to remain minor for HAPs. The facility accepted a total HAP limit of 9.5 tpy to avoid having to track individual HAPs.

AMENDMENT DESCRIPTION:

Major Amendment PER002

This is a major amendment that establishes synthetic minor limits and changes monitoring, reporting, and record keeping requirements. The amendment allows increase of emission limits as summarized in Table 2 of the Technical Support Document (TSD) and compliance demonstration of monthly emission calculations (was monthly fuel tracking). The increase and compliance demonstration change affects the test cells.

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

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
OPERATIONAL REQUIREMENTS	hdr
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 control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices 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 practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subps. 14 and 16(J)
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
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
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
PERFORMANCE TEST REQUIREMENTS	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A or B.	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
MONITORING REQUIREMENTS	hdr
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 or B, 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
RECORDKEEPING	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-2**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

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)
Recordkeeping: 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)
If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
REPORTING/SUBMITTALS	hdr
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
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
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
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)
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)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-3**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

Emissions Inventory Report: due April 1 of each calendar year starting 09/18/2000. 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**A-4**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

Subject Item: GP 001 Engine Test Cells

What to do	Why to do it
Toro will combust only gasoline or diesel fuel.	Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63
Carbon Monoxide: less than or equal to 230.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. This limit applies to the combined Carbon Monoxide (CO) emissions of all GP001 sources.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 144.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. This limit applies to the combined Volatile Organic Compounds (VOC) emissions of all GP001 sources.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 207.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. This limit applies to the combined Nitrogen Oxide (NOx) emissions of all GP001 sources.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
HAP-Single: less than or equal to 9.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. This limit applies to the combined Hazardous Air Pollutant - Single (Single HAP) emissions of all GP001 sources.	Title I Condition: To avoid major source classification under 40 CFR Section 63.2
HAPs - Total: less than or equal to 23.5 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. This limit applies to the combined Hazardous Air Pollutants - Total (Total HAP) emissions of all GP001 sources.	Title I Condition: To avoid major source classification under 40 CFR Section 63.2
Opacity: less than or equal to 20.0 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, Subp. 1
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input	Minn. R. 7011.2300, Subp. 2
Daily Recordkeeping: On each day of operation, the permittee shall record the test cells used, the number of hours each test cell was used when not vented to the catalytic oxidizer (CE002), and the number of hours each test cell was used when vented to the catalytic oxidizer (CE002).	Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63
Recordkeeping: By the 15th day of each month, the permittee shall calculate the amount of gasoline and diesel fuel used during the previous calendar month and the previous 12 months (12-month rolling sum).	Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63
Recordkeeping: By the 15th day of each month, the permittee shall calculate CO, VOC, NOx, SO2, PM, PM10, PM2.5, Single HAP, and Total HAP emissions during the previous 12 months (12-month rolling sum). These records shall be retained on-site.	Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-5

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

<p>Emission Monitoring for CO when air pollution control equipment is used:</p> <p>The following calculations should be used to determine CO emissions each month for the previous 12-month rolling period when air pollution control equipment is used for CO control.</p> <p>CO Emissions (ton/yr) = [CEMS data (ton/yr)] + Sum [EF_{d,co} (lb/gal) * UU_d (gal/yr) * ton/2000 lb] + Sum [EF_{g,co} (lb/gal) * UU_g (gal/yr) * ton/2000 lb]</p> <p>Or</p> <p>CO Emissions (ton/yr) = [EF_{g,co} (lb/gal) * CU_g (gal/yr) * ton/2000 lb * (1-CE%,_{co})] + Sum [EF_{d,co} (lb/gal) * UU_d (gal/yr) * ton/2000 lb] + Sum [EF_{g,co} (lb/gal) * UU_g (gal/yr) * ton/2000 lb]</p> <p>Where:</p> <p>CEMS data = CO CEMS emission data from the previous 12-month period, for all engine test cells that are controlled Sum = Sum of individual products (emission factor multiplied by fuel usage) EF_{d,co} = Diesel fuel CO emission factor, use most recent EPA/MPCA approved emission factor</p> <p>continued...</p>	<p>Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63</p>
<p>...continued</p> <p>EF_{g,co} = Gasoline CO emission factor, use most recent EPA/MPCA approved emission factor (CO emission factor of 0.64 lb/Hp-hr from vendor data) CU_g = Gasoline fuel usage in control engine test cells (gal per rolling 12-month period) CE%,_{voc} = The overall control efficiency limit specified in this permit for this equipment (94.0%). UU_d = Diesel fuel usage in uncontrolled engine test cells (gal per rolling 12-month period) UU_g = Gasoline usage in uncontrolled engine test cells (gal per rolling 12-month period)</p> <p>Emission factors may be converted from lb/MMBtu, lb/Hp-hr, or other units using conversion factors and heat contents from AP-42.</p>	<p>Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63</p>
<p>Emission Monitoring for VOC when air pollution control equipment is used:</p> <p>The following calculations should be used to determine VOC emissions each month for the previous 12-month rolling period when air pollution control equipment is used for VOC control.</p> <p>VOC Emissions (ton/yr) = Sum [EF_{g,voc} (lb/gal) * CU_g (gal/yr) * ton/2000 lb * (1-CE%,_{voc})] + Sum [EF_{d,voc} (lb/gal) * UU_d (gal/yr) * ton/2000 lb] + Sum [EF_{g,voc} (lb/gal) * UU_g (gal/yr) * ton/2000 lb]</p> <p>Where:</p> <p>Sum = Sum of individual products (emission factor multiplied by fuel usage) EF_{d,voc} = Diesel fuel VOC emission factor, use most recent EPA/MPCA approved emission factor EF_{g,voc} = Gasoline VOC emission factor, use most recent EPA/MPCA approved emission factor CU_g = Gasoline fuel usage in control engine test cells (gal per rolling 12-month period)</p> <p>continued...</p>	<p>Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63</p>
<p>...continued</p> <p>CE%,_{voc} = The overall control efficiency limit specified in this permit for this equipment (94.0%). UU_d = Diesel fuel usage for uncontrolled engine test cells (gal per rolling 12-month period) UU_g = Gasoline usage for uncontrolled engine test cells (gal per rolling 12-month period)</p> <p>Emission factors may be converted from lb/MMBtu, lb/Hp-hr, or other units using conversion factors and heat contents from AP-42.</p>	<p>Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-6**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

<p>Emission Monitoring for PM, PM10, PM2.5, NOx, SO2, and HAP as well as for CO and VOC when air pollution control equipment is NOT used:</p> <p>Emissions (ton/yr) = Sum [EFd * Ud * ton/2000 lb] + Sum [EFg * Ug * ton/2000 lb]</p> <p>Where:</p> <p>Sum = Sum of individual products (emission factor multiplied by fuel usage) EFd = Diesel emission factor, use most recent EPA/MPCA approved emission factor EFg = Gasoline emission factor, use most recent EPA/MPCA approved emission factor (CO emission factor of 0.64 lb/Hp-hr from vendor data)</p> <p>continued...</p>	<p>Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63</p>
<p>...continued</p> <p>Ud = Diesel fuel usage for both controlled and uncontrolled engine test cells (gal per rolling 12-month period) Ug = Gasoline usage for both controlled and uncontrolled engine test cells (gal per rolling 12-month period)</p> <p>Emission factors may be converted from lb/MMBtu, lb/Hp-hr, or other units using conversion factors and heat contents from AP-42.</p> <p>For HAPs with no manufacturing emission data or applicable EPA internal combustion emission factor, the HAP is assumed not be emitted.</p>	<p>Title 1 Condition: Limit to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63</p>
<p>The Permittee may replace or move listed emission units in GP001, provided CO, VOC, NOx, SO2, PM, PM10, PM2.5, Single HAP, and Total HAP emissions are tracked and calculated directly from material usage. The replacement emission units must have the same or less hourly PTE than the replaced emission unit. All changes must meet the requirements for GP001.</p> <p>If a proposed change triggers an applicable requirement that is not contained in this permit, the change must go through the appropriate procedure in Minn. R. ch. 7007.</p>	<p>Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-7**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

Subject Item: EU 044 Emergency Generator**Associated Items:** SV 019 aka 203

What to do	Why to do it
Opacity: less than or equal to 20.0 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2
Fuel Restriction: restricted to using diesel fuel	Minn. R. 7007.0800, Subp. 2
Sulfur Content of Fuel: less than 0.40% by weight.	Minn. R. 7007.0800, Subp. 2
Fuel Supplier Certification: obtain and maintain a fuel supplier certification for each shipment of diesel fuel, certifying that the sulfur content does not exceed 0.40% by weight.	Minn. R. 7007.0800, Subps. 4 and 5
Recordkeeping: The Permittee shall maintain documentation on-site that the unit is an emergency generator by design that qualifies under the EPA memorandum limiting operation to 500.0 hours per year.	Minn. R. 7007.0800, Subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-8**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

What to do	Why to do it
The catalytic oxidizer is voluntary and is not required to be operated. When it is operated and credit for actual emissions as specified in this permit or for emission inventory and fee purposes is sought, either Option 1 or Option 2 monitoring and recordkeeping requirements below apply.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000
OPTION 1: CEMS MONITORING FOR CO AND O2	hdr
Emissions Monitoring: The owner or operator shall use a CO and Oxygen (O2) CEMS to measure CO and O2 emissions from GP001. Monitoring requirements are located under Option 2 below.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1006
Installation Notification: due 60 days before installing the continuous emissions monitoring system. The notification shall include plans and drawings of the system.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1040, subp. 1
CEM Certification Test: due 90 days after Excess Emissions/Downtime Reports (EER's) are first required for the CEMS. The first EER is due 30 days after the end of the calendar quarter following permit issuance. Follow the Performance Specifications listed in 40 CFR pt. 60, Appendix B.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1050, subp. 1
CEMS Certification Test Plan: due 30 days before CEMS Certification Test CEMS Certification Test Pretest Meeting: due 7 days before CEMS Certification Test CEMS Certification Test Report: due 45 days after CEMS Certification Test CEMS Certification Test Report - Microfiche Copy: due 105 days after CEMS Certification Test The Notification, Test Plan, and Test Report may be submitted in alternate format as allowed by Minn. R. 7017.1120, subp. 2	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1060, subp. 1-3; and Minn. R. 7017.1080, subp. 1-4
Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1090
Monitoring Data: All data points collected by a CEMS shall be used to calculate individual hourly emission averages unless another applicable requirement requires more frequent averaging. In order for an hour of data to be considered, it must contain the following minimum number of data points: A. four data points, equally spaced, if the emission unit operated during the entire hour; B. two data points, at least 15 minutes apart, during periods of monitor calibration or routine maintenance; C. one data point if the emission unit operated for 15 minutes or less during the hour.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1160, subp. 1 and 2
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain all of the information required by 40 CFR Part 60, Appendix F, section 3. The plan shall include the manufacturer's spare parts list for each CEMS and require that those parts be kept at the facility unless the Commissioner gives written approval to exclude specific spare parts from the list.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 2
Requirement: CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily according to the procedures listed in Minn. R. 7017.1170, subp. 3 (B) and 40 CFR Section 60.13(d)(1) for each pollutant concentration, each diluent monitor, and for each monitor range. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. If no span value is specified in the applicable requirement or in a compliance document, the Permittee shall use a span value equivalent to 1.5 times the emission limit. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS. Follow the procedures in 40 CFR pt. 60, Appendix F.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 3
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1130
OPTION 2: CONTROL REQUIREMENTS	hdr
The Permittee shall operate and maintain the catalytic oxidizer (CE002) at all times that any emission unit controlled by the catalytic oxidizer is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain control equipment such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 94.0 percent	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-9**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

The Permittee shall operate and maintain control equipment such that it achieves an overall control efficiency for Carbon Monoxide: greater than or equal to 94.0 percent	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7011.0070
The Permittee shall operate and maintain the catalytic oxidizer in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Temperature: greater than or equal to 580.0 degrees F using 3-hour Rolling Average at the catalytic oxidizer inlet unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new limit shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The limit is final upon issuance of a permit amendment incorporating the change. If the 3-hour rolling average temperature is below the minimum temperature limit, the VOC and CO emitted during that time shall be considered uncontrolled until the average temperature is above the minimum temperature limit. This shall be reported as a deviation.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Temperature Monitoring: The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the catalytic oxidizer inlet temperature. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius. The recording device shall also calculate the three-hour rolling average catalytic oxidizer inlet temperature. Recorded values outside the range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 64.3(b)(4)(ii); Minn. R. 7017.0200
Daily Monitoring: The Permittee shall physically verify the operation of the temperature recording device at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 64.3(b); Minn. R. 7017.0200
Monitoring Equipment: The Permittee shall install and maintain thermocouples to conduct temperature monitoring required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is required.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings and calculated three hour rolling average temperatures for the catalytic oxidizer inlet.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 64.9(b); Minn. R. 7017.0200
Annual Calibration: The Permittee shall calibrate the temperature monitor at least once every 12 months and shall maintain a written record of the calibration and any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Quarterly Inspections: At least once per calendar quarter, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	40 CFR Section 64.3; Minn. R. 7017.0200
Annual Inspection: At least once per calendar year, the Permittee shall conduct an internal inspection of the control device that includes all operating systems of the control device. The Permittee shall maintain a written record of the inspection and any action resulting from the inspection.	40 CFR Section 64.3; Minn. R. 7017.0200
For periods when the catalytic oxidizer is operated above the minimum inlet temperature, the Permittee shall use either one of the following when completing calculations as required elsewhere in this permit: a. The overall control efficiency limit specified in this permit for this equipment (94.0%); or b. The overall control efficiency determined during the most recent MPCA approved performance test. If the tested efficiency is less than the efficiency limit in this permit, the Permittee must use the tested value in all calculations until the efficiency is demonstrated to be above the permit limit through a new test.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
Corrective Actions: If the temperature is below the minimum specified by this permit or if the catalytic oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the catalytic oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.	40 CFR Section 64.7(d); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-10**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing minimum catalytic oxidizer inlet temperature, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.	40 CFR Section 64.7(e); Minn. R. 7017.0200
As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and 2) Summary information on the number, duration, and cause for monitor downtime incidents.	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-11**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

What to do	Why to do it
Cylinder Gas Audit: due before end of each calendar half-year following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 180 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR pt. 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 4
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emissions unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR pt. 60, Appendix F, section 5.1.1.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-12**

05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

What to do	Why to do it
Cylinder Gas Audit: due before end of each calendar half-year following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 180 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR pt. 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 4
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emissions unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR pt. 60, Appendix F, section 5.1.1.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 5

TABLE B: SUBMITTALS

B-1 05/20/10

Facility Name: The Toro Co - Lyndale
Permit Number: 05300844 - 002

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.

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

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 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

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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.

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

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Relative Accuracy Test Audit (RATA) Notification	due 30 days before CEMS Relative Accuracy Test Audit (RATA)	MR001, MR002

TABLE B: RECURRENT SUBMITTALS**B-3** 05/20/10

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844 - 002

What to send	When to send	Portion of Facility Affected
Cylinder Gas Audit (CGA) Results Summary	due 30 days after end of each calendar quarter following Cylinder Gas Audit	MR001, MR002
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Permit Issuance. EER is only required if CEMS are installed. Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime or bypasses during the quarter.	CE002
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA) that was conducted in said quarter.	MR001, MR002
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 09/18/2000 . 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.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 09/18/2000 (for the previous calendar year). To be submitted on a form approved by the Commissioner both to the Commissioner and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year. The EPA copy shall be sent to: Mr. George Czerniak, Chief, Air Enforcement and Compliance Assurance Branch, Air and Radiation Division, EPA Region V, 77 West Jackson Boulevard, Chicago, Illinois 60604.	Total Facility

APPENDIX MATERIAL

Facility Name: The Toro Co - Lyndale

Permit Number: 05300844-002

Insignificant Activities and Applicable Requirements

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
3(I)	Potential emissions less than 2000 lbs. (EU031, EU032) Potential emissions less than 4000 lbs and 2000 lbs. (EU052)	Minn. R. 7011.0715
3(A)	Fuel use: space heaters fueled by kerosene, natural gas, or propane. A space heater is a heating unit that is not connected to piping or ducting to distribute the heat	Minn. R. 7011.0715

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 05300844-002

This technical support document (TSD) is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and 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 permit.

1. General Information

1.1 Applicant and Stationary Source Location:

Table 1. Applicant and Source Address

Applicant/Address	Stationary Source/Address (SIC Code: 3524)
The Toro Company 8111 Lyndale Ave S Bloomington, MN 55420 Hennepin County	The Toro Company - Lyndale 8111 Lyndale Ave S Bloomington, MN 55420 Hennepin County
Contact: Tom Myre Phone: 952-887-8309	

1.2 Facility Description

The facility is used for Toro's research and development. The facility does not manufacture or fabricate any products for market. The primary processes include engine testing, spray painting and coating. Testing activities include endurance and development testing as well as safety testing and stress testing. The primary source of air emissions at this facility is engine testing conducted in test cells. The test cells are rooms used to conduct endurance testing, developmental testing and environmental testing on engines used in Toro's products. Testing can take place in any number of the installed test cells and different tests can be carried out within the same test cell at the same time. Testing can also take place at individual workstations within the experimental test area. The primary pollutants of concern at the facility are carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NOx), sulfur dioxide (SO₂), particulate matter (PM), particulate matter less than 10 micron aerial diameter (PM₁₀), particulate matter less than 2.5 micron aerial diameter (PM_{2.5}), and hazardous air pollutants (HAP).

Other sources of air emissions are a paint booth used to paint prototype parts and a stress coat paint booth used to coat parts with a stress sensitive paint prior to stress testing. The paint booths each have a spray gun and spray cans are also used. These are insignificant activities required to be listed according to Minn. R. 7007.1300 subp. 3 (I): individual units with actual emissions less than 2000 lb/year of certain pollutants, VOC, PM, and PM₁₀ in this case. The insignificant activities are subject to Minn. R. 7011.0715 and are listed in the Additional Appendix Material.

Other sources of air emissions are space heaters fueled by natural gas. These are insignificant activities required to be listed according to Minn. R. 7007.1300 subp. 3 (A). The insignificant activities are subject to Minn. R. 7011.0715 and are listed in the Additional Appendix Material.

Pollution control equipment at this facility includes a bank of mat or panel filters (CE001) on the paint booth. It also includes a catalytic oxidizer (CE002) the facility has installed as pollution control equipment for the engine test cells. The facility has requested that use of the catalytic oxidizer is voluntary. Requirements are in the permit if the permittee chooses to apply control.

Toro will use only gasoline or diesel fuel in its engines and only diesel fuel in the emergency generator (EU044). They are also taking limits to avoid New Source Review and to remain minor for HAPs.

Emission factors are taken from AP-42, Chapter 3.3 (Gasoline and Diesel Industrial Engines, Table 3.3-1) The MPCA approved CO emission factor for gasoline of 0.64 lb/hp-hr is taken from vendor testing data submitted to EPA.

1.3 Description of the Activities Allowed by this Permit Action

This is a major amendment that establishes synthetic minor limits and changes monitoring, reporting, and record keeping requirements. The amendment allows increase of emission limits as summarized in Table 2 and compliance demonstration of monthly emission calculations (was monthly fuel tracking). The increase and compliance demonstration change affects the test cells.

1.4. Facility Emissions:

Table 2. Title I Emissions Increase Summary

Pollutant	Limited Emissions Increase from the Modification (tpy)	PSD* / 112(g) Significant Thresholds for non-major sources (tpy)	PSD / 112(g) Review Required?
PM	15.35	250	No
PM ₁₀	15.35	250	No
PM _{2.5}	15.35	250	No
NO _x	211.8	250	No
SO ₂	14.3	250	No
CO	231.4	250	No
Ozone (VOC)	144.3	250	No
Lead	7.722E-05	250	No
Single and Total HAP	9.0 23.5	10 25	No No

*Prevention of Significant Deterioration (PSD)

Table 3. Total Facility Potential to Emit Summary

	PM tpy	PM₁₀ tpy	PM_{2.5} tpy	SO₂ tpy	NO_x tpy	CO tpy	VOC tpy	Single HAP tpy	Total HAP tpy
Total Facility Limited Potential Emissions	15.35	15.35	15.35	14.3	211.8	231.4	144.3	9.0	23.5
Total Facility Actual Emissions (2007)	0.66	0.66	NA	0.59	10.02	184.14	9.28	not reported in emission inventory	

Table 4. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		CO, VOC	PM, PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , HAP
Part 70 Permit Program	CO, VOC, NO _x		PM, PM ₁₀ , PM _{2.5} , SO ₂ , HAP

2. Regulatory and/or Statutory Basis

New Source Review (NSR)

The facility is not an existing major source under New Source Review regulations. Changes authorized by this permit do not make the facility a major source under New Source Review regulations.

Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

New Source Performance Standards (NSPS)

There are no New Source Performance Standards applicable to the operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility has accepted limits on HAP emissions such that it is an area source under 40 CFR pt. 63. Thus, no major source NESHAPs apply.

Compliance Assurance Monitoring (CAM)

CAM does apply to CE002 since the collection of emission units it controls added together qualifies as a large pollutant specific emission unit (PSEU) for CO and VOC. A CAM plan is included as an attachment to this TSD.

Environmental Review & AERA

The facility has accepted limits on production such that it is not subject to environmental review, i.e. an Environmental Assessment Worksheet (EAW), and is not required to perform an Air Emissions Risk Analysis (AERA).

Minnesota State Rules

The facility is subject to Minnesota Standards of Performance for Post-1969 Industrial Process Equipment Minn. R. 7011.0715.

Table 5. Regulatory Overview of Units Affected by the Modification/Permit Amendment

Level*	Applicable Regulations	Comments:
GP 001	40 CFR Section 52.21 & Minn. R. 7007.3000	PSD: Operational limits taken to keep the potential emissions increase of CO and VOC from the engine test cell group to less than significant as defined by 40 CFR § 52.21
CE002, Option 1	40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7017	Option 1 uses CEMS monitoring for CO and O ₂ . Regulations also apply to MR001, CM001, and DA001.

CE002, Option 2	40 CFR Section 52.21 & Minn. R. 7007.3000; 40 CFR Section 70.2 and Minn. R. 7007.0200; 40 CFR Section 64.3(b)(4)(ii); 40 CFR Section 64.7(b); 40 CFR Section 64.9(b); Minn. R. 7007.0800; Minn. R. 7017.0200	Option 2 uses CAM instead of CEMS
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*Where the requirement appears in the permit (e.g., EU, SV, GP, etc.).

3. Technical Information

The following was added to the Facility Description:

- EU045 through EU052.
- CE002 for Catalytic Incinerator and current associations. Some Pollution Control information is to be determined.
- SV020 through SV035 and current associations. Stack information is to be determined.
- DA001 for CO CEMS System. Some Data Acquisition System information is to be determined.
- MR001 for Carbon Monoxide CEMS. Some Monitor information is to be determined.
- CM001 for Carbon Monoxide CEMS. Certification basis is 40 CFR Part 60 which is incorporated by reference into Minn. R. 7017.1102. Some Continuous Monitoring System information is to be determined.
- Associated emission units except EU031, EU032, and EU044 were added to GP001.

It was not in the scope of this amendment to revise language for flexibility of adding test cells. The addition of new test cells can only be allowed under a subsequent permit action. The facility is allowed to replace or move test cells.

Emission calculations: Reference Attachment 1. The CO emission factor from vendor data is approved at 0.64 lb of CO per hp-hr.

Emission calculations: include engine test cells, the catalytic oxidizer (CE002), and space heaters.

The minimum catalytic oxidizer inlet temperature of 580.0°F and the destruction efficiency for VOC and CO is no less than 94.0% according to Minn. R. 7011.0070. The capture efficiency is 100%.

The following changes are based on current MPCA policy:

- Add records for emission calculations.
- Update emission inventory submittal requirement.
- Update Operation and Maintenance Plan.
- Remove the requirement that allowed up to 60 days to install or repair Monitoring Equipment.
- Include NAAQS and MAAQS requirement.
- Typographical errors are corrected.

3.1 Calculations of Potential to Emit and Emissions Increase Analysis

Attachment 1 to this TSD contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

3.2 Periodic Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements. In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere.

The table below summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 6. Periodic Monitoring

Level*	Requirement (rule basis)	Additional Monitoring	Discussion
GP001 (Test Cells) *Where the requirement appears in the permit (e.g., EU, SV, GP, etc.).	$CO \leq 230.0$ $VOC \leq 144.0$ $NO_x \leq 207.0$ $SO_2 \leq 14.0$ $PM \leq 15.0$ $PM_{10} \leq 15.0$ $PM_{2.5} \leq 15.0$ $Single\ HAP \leq 9.0$ $Total\ HAP \leq 23.5$: all in tons per year, on a 12 month rolling basis (limit to avoid NSR)	Daily Recordkeeping: On each day of operation, the permittee shall record the test cells used, the number of hours each test cell was used when not vented to the catalytic oxidizer (CE002), and the number of hours each test cell was used when vented to the catalytic oxidizer (CE002).	Records can be generated on a daily basis. Fuel used and calculations will be calculated on a monthly basis. Credit can be taken for test cells hours of operation where the exhaust is vented to the catalytic oxidizer (CE002).
GP001, EU044 (Emergency Generator)	$SO_2 \leq 0.50\ lbs/MMBtu$ heat input; Opacity: $\leq 20.0\ %$ (Minn. R. 7011.0715)	None	Other PM and SO ₂ limits (and associated monitoring) ensure that this applicable requirement is being met.
CE002 (Catalytic Oxidizer)	VOC: Control Efficiency of 94.0% CO: Control Efficiency of 94.0% Temperature limit ≥ 580.0 °F at the oxidizer inlet	Temperature monitoring, catalyst bed reactivity, recordkeeping, O & M, inspections	Monitoring based on the Minnesota Performance Standard for Control Equipment and attached CAM Plan is adequate to have a reasonable assurance of compliance.

3.3 Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing sections and are not part of the tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

3.4 Comments Received

Public Notice Period: March 26, 2010 – April 26, 2010

EPA 45-day Review Period: March 26, 2010 – May 11, 2010

Comments were not received from the public during the public notice period.

Comments were not received from EPA during their review period.

4. Permit Fee Assessment

Attachment 4 to this TSD contains the MPCA's assessment of Application and Additional Points used to determine the permit application fee for this permit action as required by Minn. R. 7002.0019. The permit action includes the application that was received before the effective date of the rule (July 1, 2009) so no application fees are charged for the application. The permit includes the incorporation of limits to avoid classification as a major source or modification under 40 CFR 52.21 and 40 CFR 63.

5. Conclusion

Based on the information provided by The Toro Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 05300844-002 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Jared LaFave (permit writer/engineer)
Brent Rohne (enforcement)
Curt Stock (stack testing)
Peggy Bartz (peer reviewer)

AQ File No. 1271A; Trk Id 2233

Attachments:

1. Emission Calculations
2. Facility Description and CD-01
3. CAM Plan
4. Points Calculator