



**Michigan Department of Environmental Quality  
Air Quality Division – Permit Section**

**General Permit to Install Applicability Criteria for  
Batch Type Natural Gas-Fired Burnoff Ovens**

Batch type burnoff ovens are used to remove cured paints, oil or grease from metal parts such as part hangers or engines by thermal decomposition of the paints, oil or grease. The general permit may be used for no more than one burnoff oven at a stationary source and may not be used for a conveyORIZED oven that is continuously fed with parts.

The following state and federal requirements are applicable to a natural gas-fired burnoff oven and were considered in the development of the general permit to install. These requirements are addressed in the Special Conditions of the permit.

<u>Citation</u>	<u>Description</u>
R 336.1224	State rule that applies to sources of air toxics. This rule requires the application of Best Available Control Technology for toxics (T-BACT) to sources emitting air toxics, and requires that emissions from the process meet the allowed impact levels. In the case of a natural gas-fired burnoff oven proposed to be covered by this general permit to install, the use of a secondary chamber or afterburner is considered T-BACT for organic products of incomplete combustion that form in the primary chamber as non-volatile particulate-based toxics (i.e., smoke).
R 336.1225	State rule that prohibits the emissions of a Toxic Air Contaminant (TAC) in excess of a rate that results in a maximum ambient impact which is more than a health-based screening level. Based on MDEQ experience, a natural gas-fired burnoff oven with a minimum stack height of one and one half times the building height (from ground level to point of discharge) and an unobstructed vertically upward discharge meets the requirements of this rule. However, in the event that evidence indicates a failure to meet the requirements of Rule 225, the MDEQ maintains the authority to require corrective action pursuant to Rule 901.
R 336.1702	State rule that applies to new sources of Volatile Organic Compounds (VOC). This rule requires Best Available Control Technology (BACT) be applied to control VOC emissions from a new source. For a burnoff oven proposed to be covered by this general permit to install, volatile products of incomplete combustion which are formed during the pyrolysis process, shall be oxidized in the secondary chamber or afterburner which is considered BACT for this process.
R 336.2803 R 336.2804 & 40 CFR Part 52.21 (c) & (d)	Federal Prevention of Significant Deterioration (PSD) of Air Quality and the National Ambient Air Quality Standards (NAAQS). This regulation requires compliance with ambient air increment concentration limits for clean areas and the NAAQS. The burnoff oven exhaust stack restrictions ensure that the impacts of the federally regulated pollutants including particulates, sulfur dioxide, nitrogen dioxide, and carbon monoxide meet the applicable federal air quality standards.

**APPLICABILITY CRITERIA**

To qualify for the general permit to install, a natural gas-fired burnoff oven must meet the following criteria:

- The general permit to install shall apply to a batch type natural gas-fired burnoff oven equipped with a secondary chamber or an afterburner. The secondary chamber or afterburner shall have a maximum rated heat input of 560,000 Btu per hour.

- The general permit to install may not be used for more than one burnoff oven at a stationary source and may not be used for a conveyORIZED oven that is continuously fed with parts.
- The burnoff oven shall be used only to remove cured paints, oil or grease from metal parts by thermal decomposition.
- The burnoff oven may not be used for the thermal destruction or the removal of rubber, plastic, uncured paints or any materials containing sulfur or halogens (chlorine, fluorine, bromine, etc.) such as plastisol, polyvinyl chloride (PVC) or Teflon. Other prohibited materials include transformer cores, which may be contaminated with PCB-containing dielectric fluid, any wire or parts coated with lead or rubber, and any waste materials such as paint sludge or waste powder coatings.
- Proper operation of the burnoff oven requires a minimum temperature of 1400°F and a minimum retention time of 0.5 seconds in the secondary chamber or afterburner.
- The burnoff oven must be equipped with an automatic temperature control system for the primary chamber and the secondary chamber or afterburner, and an interlock system that shuts down the primary chamber burner when the secondary chamber or afterburner is not operating properly.
- All exhaust gases from the burnoff oven shall be discharged unobstructed vertically upwards to the ambient air from a stack with an exit point not less than one and one half times the building height (from ground level to point of discharge).
- The facility shall have no outstanding unresolved violations of any of the MDEQ Air Pollution Control rules, orders, or permits; or Federal air quality regulations.
- The general permit shall not apply to a source, process, or process equipment that is covered by an existing permit to install pursuant to Rule 201 and is further referenced in an outstanding consent order or consent judgment.

#### **PERMIT CONDITIONS**

Attachment A lists the terms and special conditions of the general permit to install. These terms and conditions include the applicable visible emission limits, material usage limits, process/operational limits, equipment requirements, monitoring requirements, recordkeeping requirements and stack restrictions which are necessary to ensure that a natural gas-fired burnoff oven subject to a general permit to install will comply with all state and federal applicable requirements.

**ATTACHMENT A  
GENERAL CONDITIONS**

1. The process or process equipment covered by this general permit to install shall not be reconstructed, relocated, or modified unless a Permit to Install pursuant to Rule 201 authorizing such action is issued by the Department, or an application for coverage under a General Permit to Install pursuant to Rule 201a, is submitted to and approved by the Department. For the purpose of a general permit to install, the permittee is defined as any person who owns or operates a process or process equipment at the source for which coverage under the general permit has been granted.
2. Operation of any process or process equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
3. Operation of this equipment shall not interfere with the attainment or maintenance of the air quality standard for any air contaminant. **(R 336.1207(1)(b))**
4. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5).
5. Coverage under this general permit to install does not exempt the permittee from complying with any future regulation, which may be promulgated under Part 55 of 1994 PA 451.
6. Coverage under this general permit to install does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
7. The permittee shall notify any public utility of any excavation, tunneling and discharging of explosives or demolition of buildings which may affect said utility's facilities in accordance with Act 53 of the Public Acts of 1974, being sections 460.701 to 460.718 of the Michigan Compiled laws and comply with each of the requirements of that Act.
8. The restrictions and conditions of this general permit to install shall apply to any person or legal entity which now or shall hereafter own or operate the equipment for which coverage under this general permit to install is issued. A written request to the Department for a change in ownership or operational control of the process or process equipment shall be made pursuant to Rule 219.
9. If the installation of the equipment for which coverage under this general permit to install has been issued, has not commenced within, or has been interrupted for, 18 months, then the general permit to install shall become void unless otherwise authorized by the Department as a condition of the permit. Furthermore, the permittee shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation or construction of the equipment allowed by this general permit to install. **(R 336.1201(4))**

10. Except as provided in subrules (2) and (3) or unless the special conditions of the general permit to install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301(1))**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this general permit to install.
11. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
12. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**
13. Any required testing protocol shall conform to a format acceptable to the AQD. **(R 336.2003(1))**
14. Any required test results, which must be submitted to the AQD, shall conform to a format acceptable to the AQD. **(R 336.2001(4))**
15. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**
16. For a stationary source that becomes a major source, as defined by R 336.1211(1)(a), upon receipt of approval for coverage under this general permit to install, an administratively complete application for a renewable operating permit shall be submitted not more than 12 months after the stationary source commences operation as a major source. Commencing operation as a major source occurs upon commencement of trial operation of the new or modified process or process equipment that increased the potential to emit of the stationary source to more than or equal to the applicable major source definition specified in R 336.1211(1)(a).
17. For a stationary source that is already a major source with an existing renewable operating permit, the source shall notify the Department of the installation of the process or process equipment covered by this general permit, pursuant to R 336.1215(3) or apply for a modification pursuant to R 336.1216(2) prior to commencing operation. The notification or application to modify the renewable operating permit shall be made using a form approved by the Department.

**ATTACHMENT A  
SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Process Equipment &amp; Control Devices)</b>
EU-BURNOFF	One batch type natural gas-fired burnoff oven with a secondary chamber or afterburner, used to remove cured paints, oil or grease from metal parts by thermal decomposition in a primary chamber.
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.	

**The following conditions apply to EU-BURNOFF**

**I. EMISSION LIMITS**

1. There shall be no visible emissions from EU-BURNOFF. (R 336.1225, R 336.1901, R 336.1910)

**II. MATERIAL LIMITS**

1. The permittee shall burn only natural gas in EU-BURNOFF. (R 336.1901)
2. The permittee shall not process any material in EU-BURNOFF other than cured paints, oil or grease on metal parts, racks and/or hangers. (R 336.1224, R 336.1225, R 336.1901)

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not use EU-BURNOFF for the thermal destruction or removal of rubber, plastics, uncured paints, or any other materials containing sulfur or halogens (chlorine, fluorine, bromine, etc.) such as plastisol, polyvinyl chloride (PVC), or Teflon. (R 336.1224, R 336.1225, R 336.1901)
2. The permittee shall not load any transformer cores, which may be contaminated with PCB-containing dielectric fluid, wire or parts coated with lead or rubber, or any waste materials such as paint sludge or waste powder coatings into EU-BURNOFF. (R 336.1224, R 336.1225, R 336.1901)

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-BURNOFF unless a secondary chamber or afterburner is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the secondary chamber or afterburner includes maintaining a minimum temperature of 1400°F and a minimum retention time of 0.5 seconds. (R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)
2. The permittee shall not operate EU-BURNOFF unless an automatic temperature control system for the primary chamber and secondary chamber or afterburner is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)
3. The permittee shall not operate EU-BURNOFF unless an interlock system that shuts down the primary chamber burner when the secondary chamber or afterburner is not operating properly, is installed, maintained and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to continuously monitor the temperature in the burnoff oven secondary chamber or afterburner and record the temperature at least once every 15 minutes. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**

**V. TESTING/SAMPLING** Not Applicable (N/A)

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall continuously monitor the temperature in the burnoff oven secondary chamber or afterburner and record the temperature at least once every 15 minutes. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**
2. The permittee shall calibrate the thermocouples associated with the primary and secondary chambers at least once per year. **(R 336.1201(3), R 336.1224, R 336.1225, R 336.1901)**
3. The permittee shall keep, in a satisfactory manner, temperature data records for the burnoff oven secondary chamber or afterburner. All records shall be kept on file and made available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**
4. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction of the control equipment, any maintenance performed and any testing results for EU-BURNOFF. All records shall be kept on file and made available to the Department upon request. **(R 336.1910, R 336.1912)**
5. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material (cured coating, oil or grease) processed in EU-BURNOFF, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both. All records shall be kept on file and made available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1901)**
6. The permittee shall maintain current information from the manufacturer that EU-BURNOFF is equipped with a secondary chamber or afterburner, an automatic temperature control system for the primary chamber and secondary chamber or afterburner, and an interlock system that shuts down the primary chamber burner when the secondary chamber or afterburner is not operating properly. All records shall be kept on file and made available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1901)**

**VII. REPORTING** N/A

**VIII. STACK/VENT RESTRICTIONS**

1. The exhaust gases from EU-BURNOFF shall be discharged unobstructed vertically upwards to the ambient air from a stack with an exit point not less than one and one half times the building height (from ground level to point of discharge). **(R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

**IX. OTHER REQUIREMENTS**

1. The permittee shall not replace or modify any portion of EU-BURNOFF, including control equipment, unless all of the following conditions are met: **(R 336.1201)**

- a) The permittee shall update the general permit by submitting a new Process Information Form (EQP5784) to the Permit Section and District Supervisor, identifying the existing and new equipment a minimum of 10 days before the replacement or modification.
- b) The permittee shall continue to meet all general permit to install applicability criteria after the replacement or modification is complete.
- c) The permittee shall keep records of the date and description of the replacement or modification. All records shall be kept on file for a period of at least five years and made available to the Department upon request.