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Facility Name: **Environmental Enterprises, Inc**

Application Number: **14-4613**

Date: **September 10, 1998**

**GENERAL PERMIT CONDITIONS**

**TERMINATION OF PERMIT TO INSTALL**

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**NOTICE OF INSPECTION**

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

**CONSTRUCTION OF NEW SOURCES**

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations.

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Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

#### **PERMIT TO INSTALL FEE**

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

#### **PUBLIC DISCLOSURE**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC Rule 3745-49-03.

#### **APPLICABILITY**

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

#### **BEST AVAILABLE TECHNOLOGY**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

#### **PERMIT TO OPERATE APPLICATION**

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after

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commencement of operation.

**SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION**

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

Facility Name: **Environmental Enterprises, Inc**Application Number: **14-4613**Date: **September 10, 1998**AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Environmental Enterprises, Inc.** located in **Hamilton** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
P012	Mercury Recovery Process w/secondary containment, condensers and carbon adsorbers	Secondary containment with condensers and carbon adsorbers	3745-31-05	Total Mercury emissions shall not exceed 0.0000766 lb/hr, 0.000336 TPY.  Mercury emissions from Containment Area #1 shall not exceed 0.0000189 lb/hr, 0.0000828 TPY.  Mercury emission from Containment Area #2 shall not exceed 0.0000189 lb/hr, 0.0000828 TPY.  Mercury emissions from the process vent shall not exceed 0.0000388 lb/hr, 0.00017 TPY.  0.0006 lb/MMBTU, 0.013 TPY SO <sub>2</sub>

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
P012 (Cont)				0.1 lb/MMBTU, 2.19 TPY NO <sub>x</sub>
				0.022 lb/MMBTU, 0.48 TPY CO
				0.0058 lb/MMBTU, 0.13 TPY OC
				0.0046 lb/MMBTU, 0.10 TPY PM/PM <sub>10</sub> **
				See Additional Special Term and Condition A.2.
			3745-15-07	See General Terms.
			3745-17-07*	Less stringent
		3745-17-10*	Less stringent	
		3745-18-06*	Less stringent	
		3745-23-06*	Less stringent	

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
Organic Compound	0.13
PM	0.10**
SO <sub>2</sub>	0.013
NO <sub>x</sub>	2.19
CO	0.48
PM <sub>10</sub>	0.10**
Mercury	0.000336

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\* The emission limitations established by these rules are less stringent than those established by OAC rule 3745-31-05 (BAT).

\*\* All PM is assumed to be PM<sub>10</sub>.

#### **REPORTING REQUIREMENTS**

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Hamilton County Dept. of Env. Services, 1632 Central Parkway, Cincinnati, Ohio 45210.**

#### **WASTE DISPOSAL**

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

#### **MAINTENANCE OF EQUIPMENT**

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

#### **MALFUNCTION/ABATEMENT**

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Hamilton County Dept. of Env. Services, 1632 Central Parkway, Cincinnati, Ohio 45210.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

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**AIR POLLUTION NUISANCES PROHIBITED**

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

**CONSTRUCTION COMPLIANCE CERTIFICATION**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**ADDITIONAL SPECIAL TERMS AND CONDITIONS**

**A. Applicable Emission Limitations and/or Control Requirements**

1. The following emission limitations shall not be exceeded:
  - a. total mercury emissions: 0.0000766 lb/hr, 0.000336 TPY;
  - b. mercury emissions from the Containment Area #1 stack: 0.0000189 lb/hr, 0.0000828 TPY;
  - c. mercury emissions from the Containment Area #2 stack: 0.0000189 lb/hr, 0.0000828 TPY;
  - d. mercury emissions from the process vent: 0.0000388 lb/hr, 0.00017 TPY; and,
  - e. emissions from combustion:

(i)	SO <sub>2</sub> :	0.0006 lb/MMBTU, 0.013 TPY
(ii)	NO <sub>x</sub> :	0.1 lb/MMBTU, 2.19 TPY
(iii)	CO:	0.022 lb/MMBTU, 0.48 TPY
(iv)	OC:	0.0058 lb/MMBTU, 0.13 TPY
(v)	PM*:	0.0046 lb/MMBTU, 0.10 TPY
(vi)	PM <sub>10</sub> *:	0.0046 lb/MMBTU, 0.10 TPY

\*All PM is assumed to be PM<sub>10</sub>.

2. Visible particulate emissions from any stack shall not exceed ten percent (10%) opacity as a six-minute average.

**B. Operational Restrictions**

1. The process rate of this emissions unit shall not exceed 1800 pounds per hour of contaminated material.
2. The average temperature of the exhaust gases from the condenser, for any three-hour block of time shall not be more than eleven (11) degrees Fahrenheit above the average temperature during the most recent emission test required by this permit that demonstrated the emissions unit was in compliance.

**C. Monitoring and Recordkeeping Requirements**

1. The permittee shall maintain daily records of the following:
  - a. a description of the material treated;
  - b. the number of batches treated;
  - c. the weight of each batch; and
  - d. the mercury content of each waste stream within each batch, in percent by weight.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within  $\pm 1$  percent of the temperature being measured or  $\pm 5$  degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

- a. the average temperature of the exhaust gases from the condenser during each of the 8 3-hour blocks of time during the day; and,
- b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

3. Each record of any monitoring data, testing data and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created.

Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the process rate of 1800 pounds per hour of contaminated material was exceeded.
2. The permittee shall submit temperature deviation (excursion) reports that identify all 3-hour blocks of time during which the average temperature of the exhaust gases from the condenser exceeded the temperature limitation specified above.
3. The permittee shall submit required reports in the following manner:
  - a. reports of any required monitoring and/or recordkeeping information shall be submitted to the Hamilton County Department of Environmental Services; and,
  - b. except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Hamilton County Department of Environmental Services.

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred

during that quarter. The reports shall be submitted quarterly, i.e., by January 30, April 30, July 30, and October 30 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**E. Compliance Methods/Testing Requirements**

1. Compliance with the emission limitations outlined in this permit shall be demonstrated by the emission factors, control efficiencies(if applicable)and the operational parameters as submitted in PTI application 14-4613 submitted 07/01/98 and revised 7/31/98.
2. Compliance with the opacity limitation in section A.2. shall be demonstrated by the methods outlined in OAC rule 3745-17-03(B)(1).
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within 3 months after the completion of construction;
  - b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for mercury at each of the egress points listed in the allowable emissions;
  - c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 101 of 40 CFR Part 61, Appendix B. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,
  - d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services.

The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the test and shall be submitted to the Hamilton County Department of Environmental Services within 30 days following the completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

**F. Miscellaneous Requirements**

1. The hourly emission limitation(s) outlined are based upon the emissions unit's PTE. Therefore, no hourly records are required to demonstrate compliance with these limits.