



State of Ohio Environmental Protection Agency

Northeast District Office

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Bob Taft, Governor
Bruce Johnson, Lieutenant Governor
Joseph P. Koncelik, Director

January 3, 2006

Mr. Curt Jerauld
Lubrizol- Painesville
155 Freedom Road
P.O. Box 428
Painesville, OH 44077-1234

**RE: HAZARDOUS WASTE PERMIT MODIFICATION, CLASS 1 APPROVAL
LUBRIZOL PAINESVILLE, OHD 004172 623/ 02-43-0178**

Dear Mr. Jerauld:

On December 9, 2005, Ohio EPA received a request for a Class 1A hazardous waste permit modification (PITS tracking number 051209-1A-1) from Lubrizol-- Painesville. With this letter, Ohio EPA approves the above referenced Class 1A modification submitted pursuant to Ohio Administrative Code (OAC) Rule 3745-50-51.

The following modification has been made to your March 31, 2004, Ohio Hazardous Waste Facility Installation and Operation Permit. Also, the records of Ohio EPA have been changed accordingly:

1. The modification involved the removal of permit conditions that are no longer applicable (incinerator to MACT) 051209-1A-1

Enclosed is a copy of the permit -revision. This has been included to ensure that all involved parties have written confirmation of the change. In accordance with Ohio Administrative Code Rule 3745-50-51(D)(1)(a)(ii), Lubrizol-Painesville shall send a notice within 90 days of an approved Class 1A Modification to all persons on the Agency mailing list. An updated mailing list can be obtained by contacting Pamela Allen at (614) 644-2980, or by e-mail at pamela.allen@epa.state.oh.us.

If you have any questions concerning this action, please contact Edward D'Amato at the Ohio EPA Northeast District Office at (330) 963-1170.

Sincerely,

William T. Skowronski
District Chief
Northeast District Office

WTS/ED:ddw
Enclosure

cc: Pamela Allen, Manager, RIS, DHWM, CO
Jeremy Carroll, Supervisor, Engineering Unit, DHWM, CO
ec: Kimberly Moody, DAPC, NEDO
Frank Popotnik, DHWM, NEDO

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DIV. OF HAZARDOUS
WASTE MGT

MODULE I(A) - INCINERATION

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I(A) INCINERATION

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I(A).1 Module Highlights

The Waste Heat Recovery Incinerator (WHRI) system consists of a rotary hearth incinerator with a secondary combustion chamber. A waste heat boiler is used to recover heat from flue gases and generate steam. Flue gases from the waste heat boiler are routed to a baghouse for particulate removal and a wet scrubber for acid gas removal.

The rotary hearth incinerator processes both liquid and solid waste streams. Waste streams include waste oil (recovered organics), aqueous liquids, distillate liquids, slurries, and containerized wastes. These waste streams are fed by burners, atomized liquid nozzles, a slurry nozzle, and a drop chute.

The rotary hearth incinerator (primary combustion chamber) has a refractory table in the bottom portion of the incinerator chamber that rotates while the sidewalls and top of the chamber remain stationary. Solids placed on the rotating table are agitated by stationary rabble arms and moved slowly to the outer diameter of the rotary hearth where they are discharged after a retention time of approximately 30 minutes. Solids are discharged from the rotating hearth into a collection hopper below the hearth. A drag conveyor then transfers the ash to an enclosed receptacle.

Flue gases generated in the rotary hearth incinerator flow into the secondary combustion chamber (SCC). The primary function of the SCC is to elevate the flue gas temperature for an additional time period to complete the combustion process. The SCC is equipped with a single liquid burner, which uses either fuel oil or liquid waste (recovered organic) as fuel. From the SCC the flue gas enters the heat recovery boiler. The boiler has a flue gas outlet temperature of approximately 650 deg F. A feed water economizer is used to preheat the boiler feed water and further reduces flue gas temperature. At the exit of the feed water economizer is the post economizer cooler. The post economizer cooler uses a water spray to further cool combustion gases, prior to their entering the baghouse. An induced draft (ID) fan located between the baghouse and scrubber is used to maintain negative pressure on the rotary hearth and to increase or decrease gas flow through the system. The first stage of the wet scrubber is the quench chamber, which further reduces the gas stream temperature before it enters the packed column. The wet scrubber is the final flue gas cleaning unit in the incinerator system. It removes acid gas pollutants and fine particulate matter. The stack is the last unit in the system. The height of the stack is 110 feet.

Analyzers are positioned at specific locations within the incineration system to monitor combustion of the hazardous waste and ensure compliance with permit limits.

A programmable logic controller (PLC) provides control functions, alarming, data logging, trending, graphics, and operator interaction with the incineration system. The majority of the PLC system is located in the WHRI control room. Process parameters in critical locations are continuously recorded by the PLC and monitored by the facility's control room operators. The PLC is used to maintain key operating conditions such as combustion zone temperature and process flow within permitted ranges. The PLC will automatically stop waste feeds if certain process and operation parameters fall outside the allowable operating range.

Key operating parameters for the incineration system include:

- (i) combustion temperature for the rotary hearth (minimum) and the SCC (minimum);
- (ii) waste feed restrictions;
- (iii) residence time for waste in combustion zone, to ensure complete combustion;
- (iv) negative pressure in the rotary hearth to prevent fugitive emissions;
- (v) carbon monoxide concentration in the stack gases, as an indicator of complete combustion;
- (vi) baghouse inlet temperature, as a control for dioxin/furan formation; and
- (vii) scrubber liquid to gas (L/G) ratio and scrubber liquid pH, as an indicator of scrubber effectiveness.

Lubrizol-Painesville has demonstrated compliance with the maximum achievable control technology (MACT) requirements of 40 CFR Part 63, subpart EEE by conducting a Comprehensive Performance Test and submitting to the director a Notification of Compliance under 40 CFR sections 63.1207(j) and 63.1210(d), documenting compliance with the requirements of 40 CFR Part 63, subpart EEE. Lubrizol-Painesville received a finding of compliance from Ohio EPA Division of Air Pollution Control dated April 25, 2005.

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I(A).2 Identification Criteria for Permitted and Prohibited Waste
OAC Rule 3745-57-44

Unless otherwise authorized, the Permittee may incinerate the following hazardous wastes, as specified in this Permit and only under the terms of this Permit. The Permittee may only feed the hazardous wastes as identified below at the facility subject to Permit Conditions I(A).3. through I(A).5., and I(A).8.

(a) The Permittee may incinerate the following hazardous wastes:

- Waste Oil (Recovered Organic)
- Aqueous Liquids
- Distillate Liquids
- Slurries, and
- Containerized Wastes

(b) RESERVED

(c) The Permittee shall not feed any hazardous waste whose current Ohio EPA hazardous waste code number does not appear in the Part A application under the process code of T03.

I(A).3 RESERVED

I(A).4 RESERVED

I(A).5 RESERVED

I(A).6 RESERVED

I(A).7 Closure
OAC Rule 3745-57-51

The Permittee shall follow the procedures in the Closure Plan in Section I of the permit application, and the terms and conditions of this permit.

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I(A).8 RESERVED

I(A).9 Treatment Residual

Unless the Permittee can show otherwise, per OAC Rule 3745-51-03(D), residue from the incinerator is hazardous waste and the Permittee is considered the generator.

- (i) The Permittee shall sample and analyze the treatment residue generated from the incineration system and all ancillary systems in accordance with the procedures outlined in Section C of the permit application.
- (ii) The Permittee shall manage the treatment residue generated from the incineration system in accordance with the procedures outlined in Section D of the permit application and all applicable Ohio hazardous waste regulations.

I(A).10 Compliance Schedule

In June, 2002, the Permittee submitted the "Comprehensive Performance Test Plan to Demonstrate Compliance with 40 CFR, Subpart EEE". This test plan includes a risk condition to collect emission data for site specific human health and ecological risk assessments. The above referenced document has been incorporated into this permit.

In October, 2003 the Permittee conducted the Risk Burn Test (RBT) in conjunction with the Comprehensive Performance Test (CPT) as required by HWC MACT regulations. The RBT report was submitted in April, 2004.

Within one year after completion of the Ohio EPA's review of the first RBT report, the Permittee shall complete a site specific risk assessment and submit this assessment to Ohio EPA. Within 60-days of receipt of Ohio EPA's comments, the Permittee must submit either an amended or new site specific risk assessment that incorporates Ohio EPA's comments.

End of Permit Conditions