

SUPPLEMENT to PERMIT No. 373-00
Reliable Relamping Inc
Saranac, Michigan
March 12, 2001

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, altered, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. [R 336.1201(1)]
2. If the installation, reconstruction, relocation, or alteration of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the person to whom this permit was issued, or the designated authorized agent, shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, PO Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or alteration of the equipment allowed by this Permit to Install. [R 336.1201(4)]
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. [R 336.1201(6)(b)]
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. [R 336.1201(8), Section 5510 of Act 451, PA 1994]
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. [R 336.1219]
6. Operation of this 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]
7. The owner or operator of a source, process, or process equipment shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant in excess of standards for more than one hour, or of any air contaminant in excess of standards for more than two hours, as required in this

- rule, to the District Supervisor, Air Quality Division. The notice shall be provided no 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 District Supervisor within ten days, with the information required in this rule. [R 336.1912]
8. Approval of this permit does not exempt the person to whom this permit was issued from complying with any future applicable requirements which may be promulgated under Part 55 of Act 451, PA 1994 of the Federal Clean Air Act.
 9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
 10. Operation of this equipment may be subject to other requirements of Part 55 of Act 451, PA 1994, and the rules promulgated thereunder.
 11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of 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]
 - 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 permit to install.
 12. 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]
 13. Except as allowed by Rule 285 (a), (b), and (c), applicant shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application, without prior notification to and approval by the Air Quality Division. [R 336.1201(1)]
 14. The Department may require the applicant to conduct acceptable performance tests, at the applicant'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]

SPECIAL CONDITIONS
 March 12, 2001
 (17 Special Conditions)

This permit covers the following emission unit:

Emission Unit ID	Equipment Description
EU-LAMPCRUSHER	EU-LAMPCRUSHER consists of a Dytek Manufacturing Company Model 55 portable lamp recycling machine. The machine is mounted in an enclosed truck for operation at various sites. EU-LAMPCRUSHER uses fans to maintain a negative pressure, and uses a four-stage filter system to control process air. The filter system consists of a prefilter and a HEPA filter to control particulate matter, followed by two carbon beds, in series, to control mercury vapor.

Emission Limits

Pollutant	Limit	Time Period	Applicable Requirements
1. Mercury and Mercury Compounds	0.05 milligrams per cubic meter	instantaneous	R336.1225, R336.1901
2. Mercury and Mercury Compounds	0.01 grams	per hour	R336.1225, R336.1901
3. Particulate	0.01 pounds per 1,000 pounds of exhaust gases	Instantaneous	R 336.1205, R 336.1331, 40CFR 52.21 (c) and (d)
4. Particulate	0.006 pounds	per hour	R 336.1205, R 336.1331, 40CFR 52.21 (c) and (d)
5. Particulate	0.006 tons	per year	R 336.1205, R 336.1331, 40CFR 52.21 (c) and (d)
Mercury concentrations shall be corrected to 70 degrees Fahrenheit and 29.92 inches Hg. Particulate mass per 1,000 pounds of exhaust gases shall be calculated on a dry gas basis.			

Visible Emission Limit

6. There shall be no visible emissions from EU-LAMPCRUSHER. **(R336.1301, R336.1303, 40 CFR 52.21 (c) and (d))**

Production Limit

7. The permittee shall not process more than 500,000 lamps per calendar month as a combined total for all sites. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) and (d))**

Process/Operational Limits

8. The permittee shall handle, transport, and dispose of all mercury contaminated wastes including spent filters, according to all applicable local, state, and federal rules and regulations. **(R 336.1205, R 336.1225, R 336.1901)**
9. The permittee shall operate and maintain EU-LAMPCRUSHER according to the preventative maintenance plan in Appendix A. **(R 336.1205, R 336.1225, R 336.1901)**
10. The permittee, according to the schedule listed below, shall inspect each of the particulate filters on EU-LAMPCRUSHER.
 - A. Daily Inspections - prefilter
 - B. Weekly Inspections – HEPA filter

As needed, the permittee shall clean and/or replace the filters. **(R 336.1205, R 336.1225, R 336.1901, 40CFR 52.21 (c) and (d))**

Portable Equipment

11. The permittee shall not relocate EU-LAMPCRUSHER to any new geographical site in Michigan unless all of the following criteria are met:
 - A. EU-LAMPCRUSHER shall not have any outstanding unresolved violations of any of the Michigan Department of Environmental Quality Air Pollution Control Rules, orders, or permits; or Federal Air Quality Regulations.
 - B. A notice of intent to relocate to a new site and the probable duration at the new site shall be provided to the Air Quality Division District Office prior to the actual relocation to the new site.
 - C. EU-LAMPCRUSHER shall not operate for more than 15 days per year at any one site except at the Reliable Relamping Inc. facility site located at 6459 Nash Highway, Saranac, Michigan.
 - D. A copy of this approved permit, permit conditions and appendix shall be posted in the truck within which EU-LAMPCRUSHER is located. **(R 336.1201)**

Equipment Limits

12. The permittee shall not operate EU-LAMPCRUSHER unless all system seals, the main blower and after blower, the prefilter, the HEPA filter, and the primary and secondary carbon filters are all installed and operating properly. **(R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.1910, 40CFR 52.21 (c) and (d))**
13. The permittee shall mount EU-LAMPCRUSHER in an enclosed truck and it may only be operated inside the truck. **(R 336.1205, R 336.1225, R 336.1901, R 336.1910)**

14. The permittee shall label EU-LAMPCRUSHER with Permit No. 373-00. It shall be labeled in a location that is clearly and easily visible and in a manner that is acceptable to the District Supervisor, Air Quality Division. **(R 336.1201)**

Monitoring

15. Every two weeks, according to a method acceptable to the Air Quality Division, the permittee shall measure the mercury and mercury compounds concentration in the exhaust gas stream between the Primary Carbon Filter and the Secondary Carbon Filter, and after the Secondary Carbon Filter. If the mercury concentration is 0.01 mg/m³ or greater, the permittee shall remove the Primary (lead) Carbon Filter from service, and replace it with the Secondary (lag) Carbon Filter. The permittee shall then replace the Secondary Carbon Filter with a new one. If the mercury concentration after the Secondary Carbon Filter is also found to be 0.01 mg/m³ or greater, both carbon filters shall be replaced. **(R 336.1205, R 336.1224, R 336.1225, R 336.1901, 40CFR 52.21 (c) and (d))**

Recordkeeping

16. For EU-LAMPCRUSHER, the permittee shall keep the following production, operation, maintenance, and disposal records:
 - A. Daily and monthly records of the number of lamps processed.
 - B. Records of the date, hours operated, and number of lamps processed at each site.
 - C. Records of all filter inspections, cleanings, and replacements including the number of lamps processed between carbon filter replacement.
 - D. Records of all mercury and mercury compound monitoring and the number of lamps processed between each measurement.
 - E. Records of transport and disposal of all mercury contaminated wastes, including spent filters.

All records shall be kept on file for a period of at least five years and shall be made available to the Air Quality Division upon request. **(R 336.1201, R 336.1205, R 336.1225, R 336.1901, 40CFR 52.21 (c) and (d))**

Stack Condition

17. The exhaust gases from EU-LAMPCRUSHER shall be discharged unobstructed vertically upwards to the ambient air from a stack with a maximum diameter of 4 inches at an exit point not less than 13 feet above ground level. **(R 336.1225, R 336.1901)**

APPENDIX A

INSPECTION AND MAINTENANCE PLAN

Daily Inspection

1. Inspect drive motors and mechanical parts to ensure safe operation. Make any necessary adjustment.
2. Inspect all discharge chutes for obstructions using a flashlight. Remove any obstructions before operating processor.
3. Inspect all seals to insure they are in good physical condition. Replace seals as necessary before operating processor.
4. Inspect pre-filter integrity and clean and replace as necessary.
5. Inspect level of collected material in the mercury and mercury-contaminated phosphor powder container, and remove collected material as necessary.

Every week, inspect the HEPA filter and clean or replace as necessary.

Every two weeks, using a Jerome 431-X Mercury Vapor Analyzer, or other method acceptable to the Air Quality Division District Supervisor, with a detection level of 0.01 mg/m^3 , measure the mercury concentration at Sampling Port #1 located between the primary and secondary carbon filters, and measure the mercury concentration at the exhaust stack.

When mercury is detected at a concentration of 0.01 mg/m^3 or greater at Sampling Port #1, the system will be shut down, the primary carbon filter will be removed from service, the secondary carbon filter will be used to replace the primary carbon filter, and a new carbon filter will replace the secondary carbon filter.

If mercury is detected at a concentration of 0.01 mg/m^3 or greater at the exhaust stack, the system will be shut down and both the primary and secondary carbon filters will be replaced with new carbon filters.