

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

October 3, 2014

**PERMIT TO INSTALL**  
148-14

**ISSUED TO**  
Paws Upon the Heart LLC

**LOCATED AT**  
5035 Holt Road  
Holt, Michigan

**IN THE COUNTY OF**  
Ingham

**STATE REGISTRATION NUMBER**  
P0550

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

**September 23, 2014**

DATE PERMIT TO INSTALL APPROVED:

**October 3, 2014**

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

**PERMIT TO INSTALL**

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### Common Abbreviations / Acronyms

| Common Acronyms   |   | Pollutant / Measurement Abbreviations |  |
|-------------------|---|---------------------------------------|--|
| AQD               | Air Quality Division                                      | BTU                                   | British Thermal Unit                       |
| BACT              | Best Available Control Technology                         | °C                                    | Degrees Celsius                            |
| CAA               | Clean Air Act   | CO                                    | Carbon Monoxide                            |
| CEM               | Continuous Emission Monitoring                            | dscf                                  | Dry standard cubic foot                    |
| CFR               | Code of Federal Regulations                               | dscm                                  | Dry standard cubic meter                   |
| CO <sub>2</sub> e | Carbon Dioxide Equivalent                                 | °F                                    | Degrees Fahrenheit                         |
| COM               | Continuous Opacity Monitoring                             | gr                                    | Grains                                     |
| EPA               | Environmental Protection Agency                           | Hg                                    | Mercury                                    |
| EU                | Emission Unit   | hr                                    | Hour                                       |
| FG                | Flexible Group  | H <sub>2</sub> S                      | Hydrogen Sulfide                           |
| GACS              | Gallon of Applied Coating Solids                          | hp                                    | Horsepower                                 |
| GC                | General Condition   | lb                                    | Pound                                      |
| GHGs              | Greenhouse Gases  | kW                                    | Kilowatt                                   |
| HAP               | Hazardous Air Pollutant                                   | m                                     | Meter                                      |
| HVLP              | High Volume Low Pressure *                                | mg                                    | Milligram                                  |
| ID                | Identification  | mm                                    | Millimeter                                 |
| LAER              | Lowest Achievable Emission Rate                           | MM                                    | Million                                    |
| MACT              | Maximum Achievable Control Technology                     | MW                                    | Megawatts                                  |
| MAERS             | Michigan Air Emissions Reporting System                   | ng                                    | Nanogram                                   |
| MAP               | Malfunction Abatement Plan                                | NO <sub>x</sub>                       | Oxides of Nitrogen                         |
| MDEQ              | Michigan Department of Environmental Quality (Department) | PM                                    | Particulate Matter                         |
| MSDS              | Material Safety Data Sheet                                | PM10                                  | PM with aerodynamic diameter ≤10 microns   |
| NESHAP            | National Emission Standard for Hazardous Air Pollutants   | PM2.5                                 | PM with aerodynamic diameter ≤ 2.5 microns |
| NSPS              | New Source Performance Standards                          | pph                                   | Pounds per hour                            |
| NSR               | New Source Review   | ppm                                   | Parts per million                          |
| PS                | Performance Specification                                 | ppmv                                  | Parts per million by volume                |
| PSD               | Prevention of Significant Deterioration                   | ppmw                                  | Parts per million by weight                |
| PTE               | Permanent Total Enclosure                                 | psia                                  | Pounds per square inch absolute            |
| PTI               | Permit to Install   | psig                                  | Pounds per square inch gauge               |
| RACT              | Reasonably Available Control Technology                   | scf                                   | Standard cubic feet                        |
| ROP               | Renewable Operating Permit                                | sec                                   | Seconds                                    |
| SC                | Special Condition   | SO <sub>2</sub>                       | Sulfur Dioxide                             |
| SCR               | Selective Catalytic Reduction                             | THC                                   | Total Hydrocarbons                         |
| SRN               | State Registration Number                                 | tpy                                   | Tons per year                              |
| TAC               | Toxic Air Contaminant                                     | µg                                    | Microgram                                  |
| TEQ               | Toxicity Equivalence Quotient                             | VOC                                   | Volatile Organic Compound                  |
| VE                | Visible Emissions   | yr                                    | Year                                       |

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, 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, construction, reconstruction, relocation, or modification 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 permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification 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 and 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 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 condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or 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 1994 PA 451, as amended 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, the permittee 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. 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)**

**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<br/>(Process Equipment &amp; Control Devices)</b>  | <b>Installation Date /<br/>Modification Date</b> | <b>Flexible Group ID</b> |
|--|---|--|--------------------------|
| EU-CREMATORY1  | NCE-Crawford-EMCOTEK<br>C500P<br>Fuel Type: Natural Gas<br>Maximum Charge: 200 Pounds<br>Burn Rate: 75 Pounds/Hour<br>Charge Type: ANIMAL "PET" REMAINS | October 3, 2014                                  | N/A                      |
| 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-CREMATORY1**

**DESCRIPTION:** NCE-Crawford-EMCOTEK  
 C500P  
 Fuel Type: Natural Gas  
 Maximum Charge: 200 Pounds  
 Burn Rate: 75 Pounds/Hour  
 Charge Type: ANIMAL "PET" REMAINS

**Flexible Group ID:** N/A

**POLLUTION CONTROL EQUIPMENT:** Secondary combustion chamber with afterburner.

**I. EMISSION LIMITS**

| Pollutant   | Limit                                  | Time Period / Operating Scenario | Equipment     | Testing / Monitoring Method | Underlying Applicable Requirements |
|---|--|----------------------------------|---------------|-----------------------------|------------------------------------|
| 1. PM   | 0.20 lb /1,000 lbs of gas <sup>a</sup> | Test Protocol*                   | EU-CREMATORY1 | GC 13                       | R 336.1331                         |
| <sup>a</sup> Calculated to 50% excess air.<br>* Test Protocol shall specify averaging time. |  |                                  |               |                             |                                    |

**II. MATERIAL LIMITS**

- The permittee shall not burn any waste in EU-CREMATORY1 other than the following: **(40 CFR 60.51c)**  
**Pathological wastes**—As defined in the federal Standards of Performance for New Stationary Sources, 40 CFR 60.51c, pathological waste means waste materials consisting of only human or animal remains, anatomical parts, and/or tissue; the bags/containers used to collect and transport the waste material; and animal bedding. ***EU-CREMATORY1 processes ANIMAL pathological waste and associated materials.***
- The permittee shall not charge more than 200 pounds per charge in EU-CREMATORY1, where charge is the total weight of the material placed in the incinerator to be combusted. **(R 336.1301, R 336.1331)**
- The permittee shall not burn any fuel in EU-CREMATORY1 other than natural gas. **(R 336.1224, R 336.1225, R 336.1702)**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

- The permittee shall not combust waste in EU-CREMATORY1 unless a minimum temperature of 1600°F and a minimum retention time of 1.0 seconds in the secondary combustion chamber are maintained. **(R 336.1301, R 336.1331, R 336.1910)**
- The incinerator shall be installed, maintained, and operated in a satisfactory manner to control emissions from EU-CREMATORY1. A list of recommended operating and maintenance procedures is specified in Appendix A. **(R 336.1301, R 336.1331, R 336.1910)**

**IV. DESIGN/EQUIPMENT PARAMETERS**

- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature in the secondary combustion chamber of EU-CREMATORY1 on a continuous basis. **(R 336.1301, R 336.1331)**

2. The permittee shall maintain a scale at the facility for the purpose of verifying the charge weight as required by SC II.2. **(R 336.1301, R 336.1331)**

#### **V. TESTING/SAMPLING**

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

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 complete all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(40 CFR 60.50c(b))**
2. The permittee shall monitor and record the temperature in the secondary combustion chamber of EU-CREMATORY1 on a continuous basis. **(R 336.1301, R 336.1331)**
3. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, daily records of the time (duration of burn), description and weight of charge combusted in EU-CREMATORY1, as required by SC II.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1301, R 336.1331)**
4. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, secondary combustion chamber temperature records for EU-CREMATORY1, as required by SC VI.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1301, R 336.1331)**
5. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, records on a calendar quarter basis of the periods of time when only pathological waste is burned in the incinerator as required by 40 CFR 60.50c(b). The records shall be kept on file for a period of five years and made available to the Air Quality Division upon request. **(40 CFR 60.50c(b))**
6. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, a record of all service, maintenance and equipment inspections for EU-CREMATORY1. The record shall include the description, reason, date and time of the service, maintenance or inspection. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910)**

#### **VII. REPORTING**

N/A



**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

| <b>Stack &amp; Vent ID</b> | <b>Maximum Exhaust Diameter/ Dimensions (inches)</b> | <b>Minimum Height Above Ground (feet)</b> | <b>Underlying Applicable Requirements</b> |
|----------------------------|--|---|---|
| 1. SVCREMATORY1            | 16   | 15  | 40 CFR 52.21 (c) & (d)                    |

**IX. OTHER REQUIREMENTS**

N/A

**APPENDIX A**  
**Incinerator Operation and Maintenance Guidelines**

1. Designate a trained operator for the unit and make that person responsible for compliance with the air pollution control requirements.
2. Clean grates before each day's operation (more often if necessary), and dispose of the ashes properly.
3. Do not combust waste until the secondary combustion chamber (afterburner) is at or above the minimum required temperature. This temperature must be maintained for the duration of the burn cycle.
4. Do not overload the incinerator. Stay within the given loading rates and follow the manufacturer's instructions.
5. Schedule charges to minimize opening the charging door as infrequently as possible. Opening the charging door lets cold air in and quenches the fire causing smoke.
6. Burn only the type of wastes that the incinerator has been approved to burn. Follow the manufacturer's instructions to maximize the efficiency of the unit, and to properly burn the waste(s).
7. Keep the combustion air adjusted according to the manufacturer's instructions.
8. Observe the stack frequently and adjust the operation as necessary to eliminate smoke and fly ash.
9. Post a copy of the manufacturer's manual and this Guideline near the incinerator.
10. Make quarterly inspections to check and service all of the equipment. If a qualified person is not available for proper inspections, a service contract with a reputable manufacturer is advisable.
11. Follow manufacturer's operation and maintenance guidelines.