



GENERAL AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Operations Division
Air Operations Section
700 NE Multnomah Street, Suite 600
Portland, OR 97232
Telephone: (503) 229-5696

This permit is issued in accordance with the provisions of ORS 468A.040 and OAR 340-216-0060

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Signed copy on file at DEQ

November 29, 2017

Lydia Emer, Operations Division Administrator

Dated

Crematory incinerators, human and/or animal crematories. NAICS 812220/SIC 7261

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1.0 PERMIT ASSIGNMENT

- 1.1 Qualifications** The permittee must meet all of the following conditions in order to qualify for assignment to this General Air Contaminant Discharge Permit (ACDP):
- a. The permittee is performing the cremation activities listed on the cover page of this permit, including supporting activities.
 - b. A Simple or Standard ACDP is not required for the source.
 - c. The source is not having ongoing, recurring or serious compliance problems.
- 1.2 Assignment** DEQ will assign qualifying permittees to this permit that have and maintain a good record of compliance with DEQ's Air Quality regulations and that DEQ determines would be appropriately regulated by a General ACDP. DEQ may rescind assignment if the permittee no longer meets the requirements of OAR 340-216-0025(2), 340-216-0060 and the conditions of this permit.
- 1.3 Permitted Activities** The permittee is allowed to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, revoked or assignment to this permit is rescinded, as long as conditions of this permit are complied with. If there are other emissions activities occurring at the site besides those listed on the cover page of this permit, the permittee may be required to obtain an associated General ACDP Attachment or a Simple or Standard ACDP, if applicable.
- 1.4 Relation to local land use laws** This permit is not valid in Lane County, or at any location where the operation of the permittee's processes, activities, and insignificant activities would be in violation of any local land use or zoning laws. For operation in Lane County, contact Lane Regional Air Protection Agency for any necessary permits at (541) 736-1056. It is the permittee's sole responsibility to obtain local land use approvals as, or where, applicable before operating this facility at any location.

2.0 EMISSION STANDARDS AND LIMITS

- 2.1 Visible Emissions** The permittee must comply with the following visible emission limit, as applicable:
- a. Visible emissions must not equal or exceed an average of 20 percent opacity.



- b. The visible emissions limitation in this condition is based upon a six-minute block average of 24 consecutive observations recorded at 15-second intervals as specified in OAR 340-208-0110(2).
 - c. The visible emissions standard in this condition does not apply to fugitive emissions from the source.
- 2.2 **Particulate Matter Emissions** Particulate matter must not exceed 0.080 grains per dry standard cubic foot of exhaust gases corrected to 7% O₂ at standard conditions.
- 2.3 **Fugitive Emissions** The permittee must comply with the following, where necessary:
 - a. The permittee must take reasonable precautions to prevent fugitive particulate matter, including dust, from becoming airborne from all site operations from which it may be generated. Such reasonable precautions may include, but not limited to:
 - i. Controlling vehicle speeds on unpaved roadways;
 - ii. Application of water or other suitable means on unpaved roads or other surfaces which can create airborne dusts.
 - b. For purposes of this condition, fugitive particulate emissions are visible emissions that leave the permittee's property for a period or periods totaling more than 18 seconds in a six-minute period.
 - c. Fugitive particulate emissions are determined by EPA Method 22 at the downwind property boundary.
 - d. If requested by DEQ, the owner or operator must develop and submit a fugitive emission control plan for DEQ approval. The plan must include best management practices the permittee will implement to prevent any visible emissions from leaving the property of a source for more than 18 seconds in a six-minute period. The plan must also include monitoring by the permittee, following the procedures of EPA Method 22. Once approved by DEQ, the permittee must follow the plan.
- 2.4 **Particulate Matter Fallout** The permittee must not cause or permit the emission of particulate matter larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person.



- 2.5 Nuisance and Odors** The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel.

3.0 OPERATION AND MAINTENANCE REQUIREMENTS

- 3.1 Work practices** The permittee may not burn any material other than human and/or animal bodies, containers, or other items normally allowed during cremations within the crematory incinerator(s). However, no waste material intended for disposal, including infectious waste as defined in OAR 340-230-0030, may be cremated.
- 3.2 Temperature Requirements** The permittee must comply with the following standards, as applicable:
- a. For a crematory incinerator installed prior to March 13, 1993, the exit temperature at the final chamber (afterburner) must be at or above 1600°F during the entire cremation, with a residence time of at least 0.5 seconds.
 - i. The temperature within the final chamber (afterburner) must be at or above 1200°F prior to igniting the primary burner.
 - b. For a crematory incinerator installed or modified on or after March 13, 1993, the exit temperature at the final chamber (afterburner) must be at or above 1800°F during the entire cremation, with a residence time of at least 0.5 seconds.
 - i. The temperature within the final chamber (afterburner) must be at or above 1400°F prior to igniting the primary burner.
- 3.3 Operator Training** The crematory unit(s) must be operated at all times under the direction of individuals who have received training necessary for proper operation. The following must be available on-site at all times for DEQ inspection:
- a. A description of a DEQ-approved training program. New facilities must submit a description of the operator training program to DEQ for approval within 60 days after the permit is assigned.
 - b. A written statement signed by each operator stating that the operator has undergone and understood the training program.



3.4 O&M plan

While operating in the Medford-Ashland AQMA, the permittee must prepare, implement and comply with an operation and maintenance (O&M) plan in accordance with OAR 340-240-0190. While operating in the Lakeview UGA, the permittee must prepare, implement and comply with an O&M plan in accordance with OAR 340-240-0420.

4.0 PLANT SITE EMISSION LIMITS

4.1 Plant Site Emission Limits (PSEL)

The permittee must not allow plant site emissions to exceed the following:

Pollutant	Limit	Units
PM	24	tons per year
PM ₁₀	14	tons per year
PM _{2.5}	9	tons per year
SO ₂	39	tons per year
NO _x	39	tons per year
CO	99	tons per year
VOC	39	tons per year

4.2 PM₁₀ PSEL for Medford-Ashland AQMA

For sources operating in the Medford-Ashland AQMA, the permittee must not allow plant site emissions of PM₁₀ to exceed the following:

Pollutant	Limit	Units
PM ₁₀	4.5	tons per year
	49	pounds per day

4.3 Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period.



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5.0 COMPLIANCE DEMONSTRATION

- 5.1 Visible Emissions and Particulate Matter Emissions** The permittee must demonstrate compliance with the visible emissions and particulate matter emission standards contained in Conditions 2.1 and 2.2:
- a. If the source is a new crematory incinerator;
 - b. If the source exceeds the visible emission or particulate matter emission limits in Conditions 2.1 or 2.2; or
 - c. At DEQ’s request.
- 5.2 Compliance Demonstration Procedures** As proof of compliance, the permittee must either:
- a. Conduct a source test in accordance with OAR 340-212-0120 through 340-212-0140 and submit to DEQ results from the test that demonstrate compliance with the emission limits in Conditions 2.1 and 2.2; or,
 - b. Submit to DEQ, results of testing performed on a crematory incinerator that DEQ agrees is comparable to the permittee’s crematory incinerator(s).
- 5.3 Temperature Monitoring Requirement** The permittee must record and maintain continuous monitoring data of final chamber (afterburner) exit temperature for all crematory incinerators at the facility. The monitoring device must be installed and operated in accordance with the manufacturer’s instructions, and must be located in an area of the final chamber (afterburner) that will allow evaluation of compliance with the temperature requirements in Condition 3.2.
- 5.4 PSEL Compliance Monitoring** Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:
- $$E = \frac{\sum(EF \times P)}{2000}$$
- where,
- E = pollutant emissions (ton/yr);
 - EF = pollutant emission factor (see Condition 5.5);
 - P = process production (tons of material cremated or hours of unit operation for PM/PM₁₀/PM_{2.5}; million cubic feet of natural gas combusted for SO₂, NO_x, CO and VOC)



5.5 Emission Factors

The permittee must use the default emission factors provided below for calculating pollutant emissions, unless alternative emission factors are approved in writing by DEQ. The permittee may request or DEQ may require use of alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ.

Emissions device or activity	Pollutant	Emission Factor (EF)*	Emission factor units
Crematory Unit	PM/ PM ₁₀ / PM _{2.5}	source test result	lbs/hr or lbs/ton of material
	SO ₂	1.7	lb/million cubic feet of natural gas combusted
	NO _x	100	lb/million cubic feet of natural gas combusted
	CO	84	lb/million cubic feet of natural gas combusted
	VOC	5.5	lb/million cubic feet of natural gas combusted

*- if fuel, other than natural gas, is used to operate crematory incinerator unit, contact your DEQ representative for appropriate emission factors to be used to calculate pollutant emissions and determine compliance with the plant site emission limits.

6.0 RECORDKEEPING REQUIREMENTS

6.1 Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:

- a. All records associated with continuous monitoring data including, but not limited to, original data sheets, charts, calculations, calibration data, production records and final reports.
- b. Temperature records of afterburner exit temperature.
- c. The total amount of fuel combusted in the crematory incinerator(s) on a 12-consecutive calendar month basis. (1 therm = 100 cubic feet of natural gas)
- d. The total amount of material cremated (in tons) within each crematory incinerator on a 12-consecutive calendar month basis.



e. The total number of hours each crematory incinerator is operated during a calendar year.

6.2 Excess Emissions The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance.

6.3 Complaints The permittee must maintain a log of all air quality related complaints received. The log must contain the date and time the complaint was received, a description of the complaint, and a description of the corrective action taken.

6.4 Retention of Records Records must be maintained on site for a period of five (5) years and made available to DEQ upon request.

7.0 REPORTING REQUIREMENTS

7.1 Excess Emissions The permittee must notify DEQ by telephone or in person of any excess emissions which are of a nature that could endanger public health.

a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 8.3.

b. If the excess emissions occur during non-business hours, the permittee must notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.

c. The permittee must also submit follow-up reports when required by DEQ.

7.2 Annual Report The permittee must submit to DEQ by **February 15** of each year this permit is in effect, two (2) copies of the following information for the preceding calendar year:

a. Operating parameters:

i. Number of crematory units on site.

ii. Total amount of natural gas burned (or other fuel) used in all crematory units on site.

iii. Tons of material cremated in each crematory unit; and



- iv. Total number of hours each unit operated.
 - b. Records of all excess emissions events.
 - c. Summary of complaints relating to air quality received by permittee during the year.
 - d. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
 - e. List major maintenance performed on pollution control equipment.
- 7.3 Initial Startup Notice**

The permittee must notify DEQ in writing of the date a new facility is started up. The notification must be submitted no later than seven (7) days after startup.
- 7.4 Notice of Change of Ownership or Company Name**

The permittee must notify DEQ in writing using a DEQ “Permit Application Form” within 60 days after the following:

 - a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
 - b. Sale or exchange of the activity or facility.
- 7.5 Construction or Modification Notices**

The permittee must notify DEQ in writing using a DEQ “Notice of Construction Form,” or “Permit Application Form,” and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

 - a. Constructing or installing any new source of air contaminant emissions, including air pollution control equipment;
 - b. Modifying or altering an existing source that may significantly affect the emission of air contaminants;
 - c. Making any physical change which increases emissions; or
 - d. Changing the method of operation, the process, or the fuel use, or increasing the normal hours of operation that result in increased emissions.
- 7.6 Where to Send Reports and Notices**

The reports, with the permit number prominently displayed, must be sent to the DEQ Permit Coordinator for the region where the source is located as identified in Condition 8.2.



8.0 ADMINISTRATIVE REQUIREMENTS

8.1 Reassignment to the General ACDP

The permittee must complete an application for reassignment to this permit within 60 days after the permit is reissued. DEQ will notify the permittee when the permit is reissued. The application must be sent to the appropriate regional office.

- a. If DEQ is delinquent in renewing the permit, the existing permit will remain in effect and the permittee must comply with the conditions of the permit until such time that the permit is reissued and the source is reassigned to the permit.
- b. The permittee may submit an application for either a Simple or Standard ACDP at any time, but the permittee must continue to comply with the General ACDP unless DEQ issues a Simple or Standard ACDP to the permittee.
- c. If a complete application for reassignment to the General ACDP or Simple or Standard ACDP is filed with DEQ in a timely manner, the permit will not be deemed to expire until final action has been taken on the application.

8.2 Permit Coordinator Addresses

All reports, notices, and applications should be directed to the DEQ Permit Coordinator for the area where the source is located. The Permit Coordinator addresses are as follows:

Counties	Permit Coordinator Address and Telephone
Clackamas, Clatsop, Columbia, Multnomah, Tillamook, and Washington	Department of Environmental Quality Northwest Region 700 NE Multnomah Street, Suite 600 Portland, OR 97232 Telephone: (503) 229-5696
Benton, Coos, Curry, Douglas, Jackson, Josephine, Lincoln, Linn, Marion, Polk, and Yamhill	Department of Environmental Quality Western Region 4026 Fairview Industrial Drive SE Salem, OR 97302 Telephone: (503) 378-8240
Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, Wheeler	Department of Environmental Quality Eastern Region 475 NE Bellevue, Suite 110 Bend, OR 97701 Telephone: (541) 388-6146



8.3 DEQ Contacts

Information about air quality permits and DEQ’s regulations may be obtained from the DEQ web page at www.oregon.gov/deq/aq. All inquiries about this permit should be directed to the regional office for the area where the source is located. DEQ’s regional offices are as follows:

Counties	Office Address and Telephone
Clackamas, Clatsop, Columbia, Multnomah, Tillamook, and Washington	Department of Environmental Quality Portland Office 700 NE Multnomah Street, Suite 600 Portland, OR 97232 Telephone: (503) 229-5696
Benton, Lincoln, Linn, Marion, Polk, and Yamhill	Department of Environmental Quality Salem Office 4026 Fairview Industrial Drive SE Salem, OR 97302 Telephone: (503) 378-8240
Coos, Curry, and Western Douglas	Department of Environmental Quality Coos Bay Office 381 N Second Street Coos Bay, OR 97420 Telephone: (541) 269-2721
Eastern Douglas, Jackson, and Josephine	Department of Environmental Quality Medford Office 221 Stewart Avenue, Suite 201 Medford, OR 97501 Telephone: (541) 776-6010
Crook, Deschutes, Harney, Hood River, Jefferson, Klamath, Lake, Sherman, Wasco, and Wheeler	Department of Environmental Quality Bend Office 475 NE Bellevue, Suite 110 Bend, OR 97701 Telephone: (541) 388-6146
Baker, Gilliam, Grant, Malheur, Morrow, Umatilla, Union, and Wallowa	Department of Environmental Quality Pendleton Office 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 Telephone: (541) 276-4063



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9.0 FEES

- 9.1 Annual Compliance Fee** The permittee must pay the Annual Compliance Determination Fee specified in OAR 340-216-8020, Table 2, Part 2(c), for a Class One General ACDP by **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations, will be mailed to the permittee prior to the above date.
- 9.2 Change of Ownership or Company Name Fee** The non-technical permit modification fee specified in OAR 340-216-8020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company of a source assigned to this permit.
- 9.3 Where to Submit Fees** Fees must be submitted to:
Department of Environmental Quality
Accounting / Revenue
700 NE Multnomah Street, Suite 600
Portland, Oregon 97232

10.0 GENERAL CONDITIONS AND DISCLAIMERS

- 10.1 Other Regulations** In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by DEQ.
- 10.2 Conflicting Conditions** In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
- 10.3 Masking of Emissions** The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
- 10.4 DEQ Access** The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468.095.
- 10.5 Permit Availability** The permittee must have a copy of the permit available at the facility at all times.
- 10.6 Open Burning** The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.



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10.7 Asbestos

The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance.

10.8 Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

**10.9 Termination,
Revocation, or
Modification**

The Commission may modify or revoke this permit pursuant to OAR 340-216-0060(3) and (4).



11.0 ABBREVIATIONS, ACRONYMS, DEFINITIONS

ACDP	Air Contaminant Discharge Permit	O ₂	Oxygen
ASTM	American Society for Testing and Materials	OAR	Oregon Administrative Rules
AQMA	Air Quality Maintenance Area	ORS	Oregon Revised Statutes
calendar year	The 12-month period beginning January 1st and ending December 31st	O&M	operation and maintenance
CFR	Code of Federal Regulations	PCD	pollution control device
CO	carbon monoxide	PM	particulate matter
date	mm/dd/yy	PM _{2.5}	particulate matter less than 2.5 microns in size
DEQ	Oregon Department of Environmental Quality	PM ₁₀	particulate matter less than 10 microns in size
dscf	dry standard cubic foot	ppm	part per million
EPA	US Environmental Protection Agency	ppmv	part per million by volume
FCAA	Federal Clean Air Act	PSD	Prevention of Significant Deterioration
gal	gallon(s)	PSEL	Plant Site Emission Limit
GHGs	Greenhouse gasses in CO ₂ equivalent	PTE	Potential to Emit
gr/dscf	grains per dry standard cubic foot	RACT	Reasonably Available Control Technology
ID	identification number	scf	standard cubic foot
I&M	inspection and maintenance	SER	Significant Emission Rate
lb	pound	SERP	Source Emission Reduction Plan
MMBtu	million British thermal units	SIC	Standard Industrial Code
MMcf	million cubic feet	SIP	State Implementation Plan
NA	not applicable	SO ₂	sulfur dioxide
NO _x	nitrogen oxides	Special Control Area	as defined in OAR 340-204-0070
NSPS	New Source Performance Standard	VE	visible emissions
NSR	New Source Review	VOC	volatile organic compound
		year	A period consisting of any 12-consecutive calendar months