

**LANE REGIONAL AIR POLLUTION AUTHORITY
TITLE V OPERATING PERMIT REVIEW REPORT**

**Lane County Short Mountain Landfill
84777 Dillard Access Road
Eugene, Oregon 97405**

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LIST OF ABBREVIATIONS USED IN THIS REVIEW REPORT

AMB	Ambient
AQMA	Air quality management area
ASTM	American Society of Testing and Materials
BDT	Bone dry ton
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
COMPL	Compliance
COMS	Continuous opacity monitoring system
COND	Condition
CRED	Credit
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic feet
EF	Emission factor
EPA	United State Environmental Protection Agency
EU	Emissions unit
FCAA	Federal Clean Air Act
gr/dscf	grains per dry standard cubic feet
HAP	Hazardous air pollutant
ID	Identification code
I&M	Inspection and maintenance
LRAPA	Lane Regional Air Pollution Authority
MB	Material balance
Mlb	1000 pounds
MON	Monitoring
NA	Not applicable
NESHAP	National emission standard for hazardous air pollutants
NO _x	Oxides of nitrogen
NSPS	New source performance standard
NSR	New source review
O ₂	Oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	Operation and maintenance
Pb	Lead
PCD	Pollution Control Device
PM	Particulate matter
PM ₁₀	Particulate matter less than 10 microns in size
PSD	Prevention of significant deterioration
PSEL	Plant Site Emission Limit
SCHED	Schedule
SPEC	Special
SO ₂	Sulfur dioxide
ST	Source test
VE	Visible emissions
VMT	Vehicle mile traveled
VOC	Volatile organic compound

INTRODUCTION

1. This permitting action is a new Title V permit for a municipal landfill. The Title V permit is required in accordance with OAR 340-236-0500 and 40 CFR 60.32c(c).
2. In accordance with OAR 340-218-0120(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

PERMITTEE IDENTIFICATION

3. This Title V permit identifies the applicable air quality requirements for the municipal solid waste landfill operated by Lane County's Public Works Department, Waste Management Division at 84777 Dillard Access Road, Eugene, Oregon. The landfill is known as the 'Short Mountain Landfill'.

FACILITY DESCRIPTION

4. The Short Mountain Landfill (SML) accepts municipal solid waste (MSW) for disposal. The landfill does not accept hazardous waste but maintains a separate disposal area for medical sharps and non-friable asbestos. SML began receiving waste in 1976. Major activities at the site include receipt and disposal of municipal solid waste and management of the landfill, which includes leachate management, landfill gas management, and waste segregation and cover management. The entire landfill site encompasses approximately 580 acres with approximately 72 acres of filled footprint.

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

5. The emissions units at this facility are the following:
 - F-LFG designation for fugitive landfill gas
 - PIR designation for paved industrial roads
 - UPR designation for unpaved roads
 - G-CCS designation for the landfill gas collection and control system.
6. Categorically insignificant activities include the following:
 - Constituents of a chemical mixture present at less than 1% by weight of any chemical or compound regulated under OAR Chapter 340, Divisions 20 through 32, or less than 0.1% by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year
 - Evaporative and tail pipe emissions from on-site motor vehicle operation
 - Distillate oil, kerosene, and gasoline fuel burning equipment rated at less than or equal to 0.4 million Btu/hr

- Office activities
- Janitorial activities
- Personal care activities
- Groundskeeping activities including, but not limited to building painting and road and parking lot maintenance
- On-site recreation facilities
- Maintenance and repair shop
- Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment
- Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems
- Temporary construction activities
- Accidental fires
- Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking
- Electric motors
- Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids
- On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
- Pressurized tanks containing gaseous compounds
- Storm water settling basins
- Fire suppression and training
- Emergency generators and pumps used only during loss of primary equipment or utility service

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING

7. **Conditions that apply facility-wide:**

- 7.a. Conditions 3, 4, and 5 contain a compliance schedule needed to address municipal landfill performance standards whose applicability to Short Mountain has only recently been confirmed.
- 7.b. Condition 7: This condition establishes the facility requirement to take reasonable precautions to prevent airborne dust. A general list of actions to be considered as precautions is provided in the Subconditions 4a through 4g.
- 7.c. Condition 8: This condition describes the frequency and procedures to monitor compliance with requirement in Condition 4 for reasonable precautions to prevent dust from becoming airborne. The frequency of visible emissions surveys has been established consistent with other facility-wide inspection and maintenance requirements.
- 7.d. Condition 9: This condition states the requirement that an industrial facility reduce air pollutant generating activities in the event that a poor air quality episode is declared in Lane County.
- 7.e. Condition 10 is the monitoring and recordkeeping requirement to determine compliance with Condition 9.

- 7.f. Conditions 11 and 12 are the prohibition of activities that may create public nuisances and the monitoring for compliance with the prohibition, respectively.
- 7.g. Condition 13 establishes the requirement that the facility comply with the provisions of the Federal risk management planning (emergency prevention, emergency response, community right to know) regulations in 40 CFR 68.
- 7.h. Conditions 13-17 are the landfill performance standards from OAR 340-236-0500 and 40 CFR 60 Subpart Cc, and general performance requirements from 40 CFR 60 Subpart A, that apply to this landfill. The question of applicability of OAR 340-236-0500 and 40 CFR 60 Subpart Cc has prompted two separate applicability determinations by LRAPA: first, whether the landfill operator (Lane County) was responsible for the collection and control equipment which is owned and operated by a separate entity (Emerald People's Utility District, EPUD); second whether the landfill is subject to the collection and control requirements of OAR 340-236-0500 and Subpart Cc. The conclusion to the first issue was that the landfill is responsible for the collection and control. EPA's concurrence with this LRAPA determination is provided in Attachment 1 to this review report. The second determination requires interpretation of the intent underlying the equations in 40 CFR 754(a)(2)-(5). The equations in these sections are the required methods for determination of an emission rate to compare to the 40 CFR 60 Cc threshold of collection and control applicability (50 megagrams NMOC per year). Short Mountain Landfill has an existing (ca. 1992) collection and control system that recovers and removes approximately 75% of the landfill gas generated leaving a fugitive emission rate of about 15 megagrams per year at present. The 50 megagram applicability threshold requires a landfill to use the equations in 40 CFR 754(a)(2)-(5), and these equations are used to determine subsurface gas generation rates (collection and control equipment does not affect this value). The flexibility provided in 40 CFR 754(a)(5) is allowed for site-specific determination of subsurface gas concentration or the gas generation rate constant. It is LRAPA's conclusion that the NSPS intentionally does not allow the control system to be considered in the determination of applicability of Subpart Cc collection and control requirements. LRAPA has requested EPA concurrence with this position, which effectively subjects the Short Mountain Landfill collection and control system to the performance standards of 40 CFR 60 Subpart Cc. The regulation in OAR 340-236-0500 more clearly subjects the landfill to the performance standards by removing the 50 megagram applicability criteria. OAR 340-236-0500 requires that any landfill that has accepted waste since 11/08/87 and have not been modified after 5/30/91 (both criteria are true of Short Mountain Landfill) comply with 40 CFR 60.751 through 60.759. 40 CFR 60.751 through 60.759 are the new source performance standards for municipal solid waste landfills and establish the collection and control and other requirements discussed above.
8. **Conditions applicable to emission units UPR and PIR (roads, paved and unpaved):**
- 8.a. The requirement to minimize fugitive particulate matter emissions from facility roads is stated in Conditions 18 through 20. The monitoring in Condition 19 references Condition 8 to establish a frequency of visible emission surveys and other compliance monitoring criteria.
9. **Conditions applicable to Insignificant Emission Units (IEU):**
- 9.a. Conditions 21 and 22 list the requirements applicable to processes and activities determined to be insignificant either by rule (categorically insignificant) or by quantity of emissions (generally sources whose aggregate emissions of a criteria pollutant are less than 1 ton per year). As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities and aggregate insignificant emissions, as defined in OAR 340-028-0110. For the most part, the standards that apply to IEUs are for opacity (20% limit)

and particulate matter (0.1 gr/dscf limit). LRAPA does not consider it likely that IEUs could exceed an applicable emissions limit or standard because IEUs are generally equipment or activities that do not have any emission controls (e.g., small natural gas fired space heaters) and do not typically have visible emissions. Since there are no controls, no visible emissions, and the emissions are less than one ton per year, LRAPA does not believe that monitoring, recordkeeping, or reporting is necessary for assuring compliance with the standards.

10. Conditions related to plant site emission limits:

- 10.a. Conditions 23 through 25 set out the plant site emission limits (short term and annual), the emission factors for use in determining emissions from the facility, and the calculation procedure for use in estimating emissions from the emission factors and production data.

PLANT SITE EMISSION LIMITS

Pollutant	Baseline Emission Rate (tons/yr)	Plant Site Emission Limit (PSEL)		
		Proposed PSEL (tons/yr)	Emission Increase (tons/yr)	PTE (tons/yr)
PM	82.4	174.1	91.7	174.1
PM ₁₀	29.7	54.4	24.7	54.4
CO	0.2	7	6.8	7
NO _x		1	1	1
SO ₂		1	1	1
VOC	3.0	78.4	75.4	78.4
NMOC	3.0	78.4	75.4	78.4

SIGNIFICANT EMISSION RATE

The proposed PSEL is greater than the 1977/78 baseline as shown below.

Pollutant	SER	Requested Increase Over Baseline Emissions	Increase Due To Utilizing Capacity That Existed In The Baseline Period	Increase Due To Physical Changes Or Changes In The Method Of Operation
PM	25	91.7	91.7	0
PM ₁₀	15	24.7	24.7	0
CO	100	6.8	6.8	0
NO _x	40	1	1	0
SO ₂	40	1	1	0
VOC	40	75.4	75.4	0

Pollutant	SER	Requested Increase Over Baseline Emissions	Increase Due To Utilizing Capacity That Existed In The Baseline Period	Increase Due To Physical Changes Or Changes In The Method Of Operation
NMOC		75.4	75.4	0

The increases in emissions from baseline to proposed PSEL are primarily due to population-related increases in refuse delivered to the site and associated vehicle miles traveled on this facility site. The facility acreage has remained the same since baseline, there have been no changes in method of operation (other than installation of the landfill gas collection and control system which reduces VOC emissions), and physical changes have been limited to relocation of the active areas of the landfill to make use of capacity that existed in the baseline period. The above increases in emissions thus do not constitute major modifications subject to NSR/PSD. In addition, this is a source previously not required to obtain a permit under LRAPA rules and regulations, so it did not have a PSEL for a 'netting' baseline.

11. Conditions related to testing (source sampling):

- 11a. Condition 26 of the permit establishes the standard, general procedures for stack testing at this facility.
- 11a. Condition 27 of the permit contains stack testing requirements specific to the NSPS applicable to this landfill (OAR 340-236-0500 and 40 CFR 60.752(b)(2)(iii)(B).).

12. Conditions related to monitoring and recordkeeping:

- 12a. Condition 28 of the permit establishes the general, standard monitoring requirements for Title V facilities in LRAPA's jurisdiction.
- 12b. Conditions 29 through 31 are monitoring requirements associated with the landfill gas collection system pursuant to OAR 340-236-0500 and 40 CFR 60.751 through 60.759.
- 12c. Condition 33 establishes the control system monitoring plan requirement pursuant to OAR 340-236-0500 and 40 CFR 60.756(d).
- 12d. Conditions 34 and 35 are the recordkeeping requirements for the landfill gas collection and control systems pursuant to OAR 340-236-0500 and 40 CFR 60.751 through 60.759.
- 12e. Conditions 36 and 37 are the standard, general recordkeeping requirements for Title V facilities in LRAPA's jurisdiction.

13. Conditions related to reporting requirements:

- 13a. Conditions 38 through 49 set out the reporting requirements for this Title V facility. These conditions include general, standard reporting obligations as well as those specifically required in 40 CFR 60 Subpart Cc.
- 13b. Condition 50 provides mailing addresses to which required reports are to be delivered.

HAZARDOUS AIR POLLUTANTS

	<u>Estimated Emissions-lb/yr Leachate Collection Pond/LCP</u>	<u>Estimated Emissions-lb/yr Fugitive LFG Losses/F-LFG</u>
<u>1,1,1-TCA</u>		35
<u>1,1,2,2-tetrachloroethane</u>	2	103
<u>1,1,2-TCA</u>	2	7
<u>2,4-trichlorobenzene</u>	2	
<u>chloropropane</u>	2	
<u>1,2-diphenylhydrazine</u>	2	
<u>hexane</u>		312
<u>1,4-dichlorobenzene</u>	4	17
<u>benzene</u>	2	82
<u>carbon disulfide</u>		24
<u>carbon tetrachloride</u>	2	
<u>carbonyl sulfide</u>		16
<u>chlorobenzene</u>	2	16
<u>chloroform</u>		2
<u>acrylonitrile</u>		185
<u>hydrogen sulfide</u>		667
<u>2,4-dinitrophenol</u>	10	
<u>ethylbenzene</u>	6	270
<u>MEK</u>	206	282
<u>methyl isobutyl ketone</u>	15	103
<u>methylene chloride</u>	2	670
<u>2,4,6-trichlorophenol</u>	2	
<u>2,4-dinitrotoluene</u>	2	
<u>4-nitrophenol</u>	10	
<u>benzidine</u>	10	
<u>bis (2-ethylhexyl)</u>	5	
<u>phthalate</u>		
<u>bromoform</u>	2	
<u>di-n-butyl phthalate</u>	2	
<u>dimethyl phthalate</u>	2	
<u>hexachlorobenzene</u>	2	
<u>hexachlorobutadiene</u>	3	
<u>cyclopentadiene</u>	2	
<u>hexachloroethane</u>	2	
<u>isophorone</u>	2	
<u>cumene</u>	2	
<u>N-nitrosodimethylamine</u>	2	
<u>nitrobenzene</u>	2	
<u>pentachlorophenol</u>	10	
<u>phenol</u>	2	
<u>PAH</u>	35	
<u>styrene</u>	2	
<u>tetrachloroethene</u>	2	341
<u>toluene</u>	30	

	<u>Estimated Emissions-lb/yr Leachate Collection Pond/LCP</u>	<u>Estimated Emissions-lb/yr Fugitive LFG Losses/F-LFG</u>
<u>toxaphene</u>	0.2	
<u>trichloroethene</u>	2	204
<u>vinyl chloride</u>	0.6	253
<u>xylenes</u>	23	709
Total Aggregate HAPs	419	4300

GENERAL BACKGROUND INFORMATION

14. This is a new Title V permit for a source which was not subject to permit requirements in the past. The Title V permit is a requirement in the NSPS for municipal landfills with greater than a stated threshold quantity of waste in place, which have received waste since 1987, and which have a calculated NMOC emission rate greater than 50 megagrams per year.

COMPLIANCE HISTORY

15. LRAPA has received 2 complaints attributed to this landfill's operations in the past 5 years. The first, received on June 6, 1995 may have been related to odors from combustion equipment, as opposed to municipal refuse disposal activities. The second complaint was related to dust from the landfill and was received on May 31, 1996. The complaint was addressed by the permittee taking additional action to control fugitive dust at the facility. There have been no complaints received by LRAPA regarding Short Mountain Landfill since 1996. There are no outstanding compliance issues with the facility.

SOURCE TEST RESULTS

16. The landfill owns and operates no stack sources for standard sampling. The separately owned landfill gas generating facility, however, is subject to testing requirements of 40 CFR 60.752(b)(2)(iii)(B). Due to uncertainty in applicability of the NSPS requirements, the testing has not been performed to date. The permit includes a condition (Condition 27) that requires the performance test within 180 days of issuance of the Title V permit to the landfill and conditions 3,4, and 5 establish an additional compliance schedule for OAR 340-236-0500 requirements that have been delayed due to uncertainty in applicability .

EMISSIONS DETAIL SHEETS

17. See Attachment 2 to this review report.

PUBLIC NOTICE

18. This permit was on public notice from November 12, 2000, to December 12, 2000. There was no request for a public hearing, so none was held. Comments were received from Kenneth Kohl, Lane County Short Mountain Landfill and from Alan Zelenka, Emerald People's Utility District.

**Response To Comments Received On The Draft Title V Operating Permit For
Lane County's Short Mountain Landfill:**

Comments received from Kenneth Kohl, Dated 12/11/00 (See Attachment 3):

Comment Number 1:

The referenced conditions in the draft permit are incorporations of the requirements of the New Source Performance Standards for existing landfills (40 CFR 60 Subpart Cc). EPA has provided legal interpretation of the applicability of the NSPS for the Short Mountain situation that indicates that collection and control of landfill gas remains the responsibility of the landfill gas generator (Short Mountain). The referenced conditions in the draft permit will be unchanged.

Comment Number 2:

The comment refers to conditions of the Title V permit that duplicate or are inconsistent with conditions of the solid waste discharge permit (SWDP). A statutory requirement of the Title V permit is that it includes emission limitations and standards that assure compliance with all applicable requirements at the time of permit issuance. The referenced conditions are required elements of this Title V permit and will be unchanged. LRAPA agrees, however, that coordination and correction or removal of duplicative or contradictory air quality related conditions from the SWDP are desirable.

Comment Number 3: Conditions 10 and 39.b.v.

The comment asks whether 40 CFR 68 is applicable to the landfill due to the presence of methane in the landfill gas. Methane is one of the flammable gases listed in 40 CFR 68, but recent changes to the regulation excluded listed flammable gases if used as fuel or held for sale at retail facilities (see the March 13, 2000 Federal Register, Volume 65, Number 49). The use of the landfill gas from the Short Mountain landfill is as fuel for EPUD's generators, so 40 CFR 68 does not apply as the system is currently configured.

Comment Number 4:

One of the conditions has been deleted as requested by the commenter.

Comments received from Alan Zelenka, Dated 12/12/00 (See Attachment 4):

Comment Number 1:

LRAPA appreciates this reminder.

Comment Number 2:

LRAPA considers Emerald and the landfill to be separate entities as the operations are under separate ownership and are described by different two-digit SIC codes. Emerald's revised ACDP will include emission limits that are below the major source thresholds that require a Title V permit. Your comment is accurate.

Comment Number 3:

Short Mountain may want to consider modifying its contract with Emerald. The generator engines operated by EPUD are currently more than adequate to satisfy Short Mountain's collection needs, indefinitely postponing a need to change Short Mountain's permit. Should Emerald decide it was not economically feasible to operate the engines or continue to update the collection system, Short Mountain might have to take ownership itself.

Comment Number 4:

The requirements of the NSPS for the Short Mountain Landfill establish collection criteria, control criteria, and monitoring criteria. LRAPA does not interpret these requirements to indicate ownership or sole responsibility for Emerald's emissions by the landfill. The PSELs in Short Mountain's draft permit are left unchanged.

Comment Number 5: Sections 23 and 24

LRAPA has agreed to the idea of testing only one of four identical engines to satisfy the performance test requirement. We also agreed to consider accepting Coffin Butte data for the performance test were Emerald to provide compelling evidence that the Coffin Butte gas and engines are identical to the Short Mountain/Emerald situation. It is LRAPA's opinion that the latter will be a difficult argument to substantiate.

Comment Number 6: Section 38

LRAPA understands that the information required as a "collection and control system design plan" has been prepared and submitted to DEQ in stages as development plans. If these plans include the required elements of the NSPS and can be summarized efficiently, the summaries will satisfy Condition 38.

Comment Number 7: Section 43.d.

Excess emissions are defined as emissions which exceed a technology-based standard or permit limit. The situations described can be handled by projecting emissions for them and recording those emissions as part of the PSEL for Emerald. As such they would not be excess emissions.

19. On May 17, 2001, Lane County submitted a request for hearing to contest conditions in Title V permit 204740. A copy of the request for hearing is attached (Attachment 5). The conditions of the permit prompting the appeal were those involving the gas collection and control equipment under control of Emerald People's Utility District (EPUD). During a preliminary meeting with Lane County, it was determined that modifications to both the EPUD permit and the Lane County permit, making both permits equivalent, would satisfy the concerns and avoid the need for an appeal. Accordingly, EPUD's ACDP and Lane County's Title V Permit were reopened for cause. The required notification of reopening was received by Lane County and EPUD on June 27, 2001.

A preface to both permits was added, prior to Condition 1 of each, explaining the responsibilities of both parties, and requiring that both permits be modified for consistency if either one was modified. Conditions 16.d. of the Lane County permit and 9.d. of the EPUD permit were modified to add clarity regarding

operating parameters of gas collection wells. Reporting requirements of the EPUD ACDP were modified to require that data required for Lane County's Title V certifications were forwarded to Lane County prior to the dates of Lane County's semi-annual compliance certifications. EPUD's ACDP expiration date was adjusted to be identical to the expiration date of the Lane County Permit.

Both modified permits were on Public Notice from September 14, 2001, through October 16, 2001. No written comments were received during the 30-day comment period. This modified Title V permit was submitted to the EPA for review as a proposed permit on November 6, 2001. Because no substantive comments were received during the 30-day comment period, LRAPA requested five-day expedited review. On November 26, 2001, LRAPA received notification from EPA that the permit is eligible for issuance.

The public will have 105 days (45-day EPA review period plus 60 days) from the date the proposed permit was sent to EPA to appeal the permit with EPA.

RK
12/5/01