Washington State Department of Ecology
Eastern Region Office
4601 North Monroe
Spokane, Washington 99205-1295

In the matter of Compliance by **EPHRATA LANDFILL** with Section 70A.15.2260 RCW, Operating Permits for Air Contaminant Sources, and the applicable rules and regulations of the Department of Ecology	)))))	Air Operating Permit: DRAFT AQPID: A0250236

To:	Ephrata Landfill 124 Enterprise St SE Ephrata, WA 98823	Issuance Date: Effective Date: Expiration Date:	DATE, 2025 DATE, 2025 DATE, 2030

Responsible Official:	Andy Booth
Facility Contact:	Jason Collings
Facility Location:	38032 Neva Lake Rd, NW, Ephrata, WA 98823
AQPID Number:	A0250236

Legal Authority: This Air Operating Permit is issued under the authority and provisions of the Federal Clean Air Act (FCAA), (42 U.S.C. 7401, et seq.), the Washington Clean Air Act, Chapter 70A.15 Revised Code of Washington (RCW) and the Operating Permit Regulation, Chapter 173-401 Washington Administrative Code (WAC).

Hereinafter, Ephrata Landfill is called the permittee. The permittee is required to comply with the provisions contained within this permit.

This Renewal Air Operating Permit, DATED at Spokane, Washington, this XX day of MONTH, 2025.

Reviewed By:	Approved By:
Andrew Kruse, P.E. Environmental Engineer Eastern Region Air Quality Program	Karin Baldwin Section Manager Eastern Region Air Quality Program

List of Abbreviations

AOP	Air Operating Permit
BACT	Best Available Control Technology
BTU	British Thermal Units
°C	Degrees Celsius
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
dscf	Dry Standard Cubic Foot
dscf/m	Dry Standard Cubic Foot per minute
Ecology	Washington State Department of Ecology
E.I.T.	Engineer in Training
EPA	United States Environmental Protection Agency
F	Degrees Fahrenheit
FCAA	Federal Clean Air Act
FDCP	Fugitive Dust Control Plan
ft3	Cubic foot
gr/dscf	Grain per dry standard cubic foot
hr	Hour
MMBtu	Million British Thermal Units
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
MVAC	Motor Vehicle Air Conditioner
N2	Nitrogen gas
NOC	Notice of Construction
NOx	Oxides of Nitrogen
NSPS	New Source Performance Standard
O2	Oxygen
O&M	Operation & Maintenance
P.E.	Professional Engineer
PM	Particulate Matter
PM-10	Particulate Matter with aerodynamic diameter □ 10 micrometers
ppm	Parts per million
PSD	Prevention of Significant Deterioration
QIP	Quality Improvement Plan
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
RM	EPA Reference Method from 40 CFR Part 60, Appendix A
SERP	Source Emission Reduction Plan
scfm	Standard Cubic Feet per Minute
SIP	State Implementation Plan
SO2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
yr	year

All information required for submittal throughout this permit is to be submitted to Ecology, EPA, or both as specified by the applicable requirement, at the following addresses:

Air Quality Program
Department of Ecology
4601 North Monroe St.
Spokane, WA 99205-1295

U.S. EPA Region 10
Office of Air, Waste and Toxics (AQT-150)
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3140

1) Standard Conditions

a) Permit Shield

i) Compliance with the terms and conditions of this permit will be deemed compliance with those applicable requirements that are specifically included and identified in this permit as of the date of permit issuance.

ii) The permit shield will not apply to any insignificant emissions unit or activity designated under WAC 173-401-530.

[WAC 173-401-530(3)], [WAC 173-401-640(1)]

b) Enforceability

All terms and conditions of this permit are enforceable by the EPA and citizens unless specifically designated as state-only enforceable.

[WAC 173-401-625]

c) Permit Fees

The permittee must pay fees as a condition of this permit in accordance with Ecology's fee schedule. Failure to pay fees in a timely fashion will subject the permittee to civil and criminal penalties as prescribed in Chapter 70A.15 RCW. Ecology may revoke this operating permit if the permit fees are not paid, per WAC 173-401-930(3).

[WAC 173-401-620(2)(f), 930(3)], [RCW 70A.15.2270]

d) Permit Continuation

This permit and all terms and conditions contained therein, including any permit shield provided under WAC 173-401-640, will not expire until the renewal permit has been issued or denied if a timely and complete application has been submitted. An application shield granted pursuant to WAC 173-401-705(2) will remain in effect until the renewal permit has been issued or denied if a timely and complete application has been submitted.

[WAC 173-401-620(2)(j)]

e) Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

[WAC 173-401-620(2)(d)]

f) Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, the permittee must allow Ecology, EPA, or an authorized representative to perform the following:

i) Enter upon the permittee's premises where a chapter 401 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

ii) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

iii) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

iv) As authorized by WAC 173-400-105 and the FCAA, sample or monitor, at reasonable times, substances, or parameters for the purpose of assuring compliance with this permit or other applicable requirements.

i. Ecology may require the permittee to conduct stack testing and/or ambient air monitoring and report the results to Ecology.

ii. Ecology may conduct or require that a test be conducted using approved methods from 40 CFR parts 51, 60, 61 and 63 (in effect on February 20, 2001), or Ecology's Source Test Manual – Procedures for Compliance Testing. The permittee will be required to provide platform and sampling ports. Ecology must be allowed to obtain a sample from any emissions unit. The permittee will be given the opportunity to observe the sampling and to obtain a sample at the same time.

v) No person will obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties.

vi) Nothing in this condition will limit the ability of EPA to inspect or enter the premises of the permittee under Section 114 or other provisions of the FCAA.

[WAC 173-401-630(2)], [WAC 173-400-105(2),(4)], [RCW 70A.15.2500], [Order No. 19AQ-E051, Approval Condition 12(c)]

g) Duty to Comply

The permittee must comply with all conditions of this chapter 173-401 operating permit. Any permit noncompliance constitutes a violation of chapter 70A.15 RCW and, for

federally enforceable provisions, a violation of the FCAA. Such violations are grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.

[WAC 173-401-620(2)(a)], [Order No. 19AQ-E051, Approval Condition 12(f)]

h) Duty to Provide Information

The permittee must furnish to Ecology, within a reasonable time, any information that Ecology may request in writing to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to Ecology copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to Ecology along with a claim of confidentiality. Ecology will maintain confidentiality of such information in accordance with RCW 70A.15.2510.

No person will make any false material statement, representation, or certification in any form, notice, or required report. No person will render inaccurate any required monitoring device or method.

[WAC 173-401-620(2)(e)], [WAC 173-400-105(7), (8)]

i) Duty to Supplement or Correct Application

The permittee, upon becoming aware that any relevant facts were omitted, or incorrect information was submitted in the permit application, must promptly submit such supplementary facts or corrected information. The permittee must also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

[WAC 173-401-500(6)]

j) Need to Halt or Reduce Activity not a Defense

It will not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

[WAC 173-401-620(2)(b)]

k) Excess Emissions Due to an Emergency

The permittee may seek to establish that noncompliance with a technology-based[1] emission limitation under this permit was due to an emergency.[2] To do so, the permittee must demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that:

i) An emergency occurred and that the permittee can identify the cause(s) of the emergency,

ii) The permitted facility was being properly operated at the time of the emergency,

iii) During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit, and

iv) The permittee submitted notice of the emergency to Ecology within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. The notice must be directed to appropriate air quality personnel at Ecology's Eastern Regional Office using the most recent contact information.

[WAC 173-401-645]

l) Unavoidable Excess Emissions

i) WAC 173-400-107 is in effect until 173-400-108 and 173-400-109 become effective.

ii) The permittee will have the burden of proving to Ecology that excess emissions were unavoidable. This demonstration must be a condition to obtain relief under 1(l)(ii)(i), 1(l)(ii)(ii), or 1(l)(ii)(iii).

i. Excess emissions due to startup or shutdown conditions must be considered unavoidable provided the permittee reports as required under Condition 1(k)(i) and adequately demonstrates that the excess emissions could not have been prevented through careful planning and design and if a bypass of control equipment occurs, that such bypass is necessary to prevent loss of life, personal injury, or severe property damage.

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[1] Technology-based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain a health-based air quality standard.

[2] An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of this source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes this source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency will not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

ii. Excess emissions due to scheduled maintenance must be considered unavoidable if the permittee reports as required under Condition 1(k)(i) and adequately demonstrates that the excess emissions could not have been avoided through reasonable design, better scheduling for maintenance or through better operation and maintenance practices.

iii. Excess emissions due to upsets must be considered unavoidable provided the permittee reports as required under Condition 1(k)(i), and adequately demonstrates that:

(a) The event was not caused by poor or inadequate design, operation, or maintenance.

(b) The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance.

(c) The operator took immediate and appropriate corrective action in a manner consistent with good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action. This includes slowing or shutting down the emission unit as necessary to minimize emissions when the operator knew or should have known that an emission standard or permit condition was being exceeded.

[WAC 173-400-107]

iii) WAC 173-400-108 (State-only requirement not federally enforceable) This section will be in effect as outlined in Condition 1(l)(i).

i. Notify the permitting authority.

(a) When excess emissions represent a potential threat to human health or safety, the owner or operator must notify the permitting authority by phone or electronic means as soon as possible, but not later than 12 hours after the excess emissions were discovered.

(b) For all other excess emissions, the owner or operator must notify the permitting authority in a report as provided in 1(l)(iii)(ii).

ii. Report – The owner or operator must report all excess emissions to the permitting authority.

(a) To claim emissions as unavoidable under WAC 173-400-109, the report must contain the information in 1(l)(iii)(ii)(c).

(b) Chapter 173-401 WAC source: As provided in WAC 173-401-615(3) and 1(l)(iii)(ii)(c).

(c) For an excess emission event that the owner or operator claims was unavoidable under WAC 173-400-109, the report must also include the following information:

(i) Properly signed contemporaneous records or other relevant evidence documenting the owner or operator's actions in response to the excess emissions event.

(ii) Information on whether installed emission monitoring and pollution control systems were operating at the time of the exceedance. If either or both systems were not operating, information on the cause and duration of the outage.

(iii) All additional information required under WAC 173-400-109(5) supporting the claim that the excess emissions were unavoidable.

[WAC 173-400-108]

iv) WAC 173-400-109 (State-only requirement not federally enforceable) This section will be in effect as outlined in Condition 1(l)(i).

i. Excess emissions determined to be unavoidable under the procedures and criteria in this section are violations of the applicable statute, rule, permit, or regulatory order.

(a) The permitting authority determines whether excess emissions are unavoidable based on the information supplied by the source and the criteria in 1(l)(iv)(v).

(b) Excess emissions determined by the permitting authority to be unavoidable are:

(i) A violation subject to WAC 173-400-230 (3), (4) and (6).

(ii) Not subject to civil penalty under WAC 173-400-230(2).

ii. The permittee will have the burden of proving to the permitting authority in an enforcement action that excess emissions were unavoidable. This demonstration must be a condition to obtaining relief under 1(l)(iv)(v).

iii. This section does not apply to an exceedance of an emission standard in 40 CFR Parts 60, 61, 62, 63, and 72, or a permitting authority's adoption by reference of these federal standards.

iv. Excess emissions that occur due to an upset or malfunction during a startup or shutdown event are treated as an upset or malfunction under 1(l)(iv)(v).

v. Excess emissions due to an upset or malfunction will be considered unavoidable provided the permittee reports as required by WAC 173-400-108 and adequately demonstrates to the permitting authority that:

(a) The event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition.

(b) The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance.

(c) When the operator knew or should have known that an emission standard or other permit condition was being exceeded, the operator took immediate and appropriate corrective action in a manner consistent with safety and good air pollution control practice for minimizing emissions during the event, taking in to account the total emissions impact of the corrective action. Actions taken could include slowing or shutting down the emission unit as necessary to minimize emissions.

(d) If the emitting equipment could not be shut down during the malfunction or upset to prevent the loss of life, prevent personal injury or severe property damage, or to minimize overall emissions, repairs were made in an expeditious fashion.

(e) All emission monitoring systems and pollution control systems were kept operating to the extent possible unless their shutdown was necessary to prevent loss of life, personal injury, or severe property damage.

(f) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent possible.

(g) All practicable steps were taken to minimize the impact of the excess emissions on ambient air quality.

[WAC 173-400-109]

m) Reporting

i) Monthly Deviation Reports

The permittee must report all deviations from permit conditions and must include the following information: the time the deviation occurred, the duration of the deviation, the magnitude of the deviation in relation to the applicable limit, the probable cause of the deviation, and any corrective actions or preventive measures taken. Deviations must be reported to Ecology at the address included in this permit.

i. Deviations which represent a potential threat to human health or safety, or which the permittee believes to be unavoidable (1(l)) must be reported as soon as possible, but in no case later than 12 hours after the deviation is discovered.

ii. Excess emissions due to emergency (1(k)), or which the source believes unavoidable (1(l)), and does not meet the criteria 1(m)(i)(i), must be reported within two working days of the event.

iii. All other deviations must be reported no later than 30 days after the end of the month during which the deviation is discovered.

iv. For any month during which no permit deviations are discovered, the permittee must submit a report no later than 30 days following the end of the month stating that no deviations were observed during that period.

Upon request by Ecology, the permittee must submit a full written report including further details regarding the known causes, the corrective actions taken, and the preventative measures taken to minimize or eliminate the chance of recurrence. The source must maintain a contemporaneous record of all deviations. Responsible official certification in accordance with Condition 1(m)(v) of monthly deviation reports must be included in each semi-annual monitoring report covering all deviations reported during the previous six-month period.

[WAC 173-401-615(3)(b)], [WAC 173-400-107]

ii) Semi-Annual Monitoring Reports

The permittee must submit reports of any required monitoring (i.e., Monitoring Recordkeeping and Reporting identified in section 3) at least once every six months. Six-month periods will be from January 1st through June 30th, and from July 1st through December 31st.

i. Semi-annual monitoring reports will be due no later than 45 days following the end of each six-month period.

ii. All instances of deviations from permit requirements must be clearly identified in such reports.

iii. The report must include identification of all months during which no deviations occurred.

iv. All required reports must be certified by a responsible official consistent with Condition 1(m)(vi).

[WAC 173-401-615(3)(a)]

iii) Compliance Certifications

The permittee must submit a certification of compliance with permit terms and conditions at least once per calendar year. Certifications must be submitted no later than 45 days following the end of the certification period (calendar year). Ecology may require that compliance certifications be submitted more frequently for those emission units not in compliance with permit terms and conditions, or where more frequent certification is specified in the applicable requirement.

[WAC 173-401-630(5)(a)], [WAC 173-401-630(1)]

i. The certification must describe and include the following:

(a) The permit term or condition that is the basis of the certification,

(b) The current compliance status,

(c) Whether compliance was continuous or intermittent, and

(d) The methods used for determining compliance, currently and over the reporting period, consistent with WAC 173-401-615(3)(a).

[WAC 173-401-630(5)(c)]

ii. All compliance certifications must be submitted to Ecology and EPA Region 10 at the respective addresses included in this permit.

[WAC 173-401-630(5)(d)]

iii. The permittee need not certify compliance for insignificant emission units or activities if there is no permit requirement for testing, monitoring, recordkeeping or reporting.

[WAC 173-401-530(2)(d)]

iv. All compliance certifications must include certification by a responsible official in accordance with Condition 1(m)(vi).

v. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any requirement of this permit, nothing will preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.

[40 CFR 52.33(a)], [40 CFR 60.11(g)]

iv) Emissions Inventory

The permittee must submit an inventory of actual emissions from the source for each calendar year. The inventory must include segmented stack and fugitive emissions of TSP, PM-10, SO2, CO, NOX, lead, and VOC's, and must be submitted no later than April 15th of the following year. The source must maintain records of information necessary to substantiate any reported emissions, consistent with the averaging times for the applicable standards. Emissions inventories must be sent to Ecology at the address included in this permit.

[WAC 173-400-105(1)]

v) Greenhouse Gas Reporting

If the permittee emits 10,000 metric tons of greenhouse gases (GHGs) or more per calendar year, GHGs are required to be reported to Ecology. (Note: WAC 173-

441-030(5) details reporting requirements for facilities which are subject to the requirements but fall below reporting thresholds). All requests, notifications, and communications to Ecology regarding GHGs, other than submittal of the annual GHG report, must be submitted to:

Greenhouse Gas Report
Air Quality Program
Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Annual GHG reports must be submitted through Ecology's GHG Reporting webpage.

Reports must meet the requirements of WAC 173-441-050 and include the annual emissions of the GHGs listed in WAC 173-441-040 from source categories listed in WAC 173-441-120. The annual GHG report must be submitted electronically in accordance with WAC 173-441-050 and WAC 173-441-060, in a format specified by Ecology. The GHG report is due to Ecology by March 31st of each year for the previous calendar year.

If the facility emits 10,000 metric tons of GHGs or more per calendar year, the permittee must develop a written GHG monitoring plan. The plan must be revised, as needed, to reflect changes in processes, monitoring instruction, and quality assurance procedures; or to improve procedures for the maintenance and repair of monitoring systems to reduce the frequency of monitoring equipment downtime.

[WAC 173-441]

vi) Submittals

Reports, test data, monitoring data, notifications, certifications, and applications (including requests for renewal) must be submitted to Ecology at the address included in this permit. Ecology may specify a different or additional submittal format in accordance with WAC 173-400-105(1), such as electronic submittal(s). Any application form, report, or compliance certification submitted to Ecology pursuant to this permit must contain certification of truth, accuracy, and completeness by a responsible official. All certifications must state that "*based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete*". The permittee must promptly, upon discovery, report to Ecology any material error or omission in these records, reports, plans or other documents.

[WAC 173-401-520], [WAC 173-401-500(6)]

n) Severability

If any provision of this permit, or application of any provision of this permit, is held to be invalid, all unaffected provisions of the permit will remain in effect and be enforceable.

[WAC 173-401-620(2)(h)], [RCW 70A.15.9004]

o) Administrative Permit Amendments

i) An administrative permit amendment is a permit revision that:

i. Corrects typographical errors within the permit,

ii. Identifies a change in the name, address, or phone number of any person identified in the permit, or provides for a similar minor administrative change at the source,

iii. Requires more frequent monitoring or reporting by the permittee,

iv. Allows for a change in ownership or operational control of a source where the permitting authority has determined that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to Ecology,

v. Incorporates into the permit the terms, conditions, and provisions from orders approving notice of construction applications processed under an EPA-approved program, provided that such a program meets procedural requirements substantially equivalent to the requirements of WAC 173-401-700, 173-401-725, and 173-401-800 that would be applicable to the change if it were subject to review as a permit modification, and compliance requirements substantially equivalent to those contained in WAC 173-401-600 through 173-401-650.

ii) The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

iii) The permitting authority will, upon taking final action granting a request for an administrative permit amendment, allow coverage by the permit shield in WAC 173-401-640 for administrative permit amendments made pursuant to condition 1(o)(i)(v) above.

[WAC 173-401-720]

p) Permit Actions

This operating permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation

and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[WAC 173-401-620(2)(c)]

q) Reopening for Cause

i) Ecology will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances:

i. Additional requirements under the FCAA become applicable to a major source three or more years prior to the expiration date of this permit. Such a reopening must be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit unless the original permit or any of its terms and conditions have been extended pursuant to WAC 173-401-620(2)(j).

ii. Ecology or the Administrator determines that this permit contains a material mistake, or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

iii. Ecology or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

ii) Proceedings to reopen and issue this permit will follow the same procedures as apply to initial permit issuance and will affect only those parts of this permit for which cause to re-open exists. Such reopening must be made as expeditiously as practicable.

iii) Re-openings must not be initiated before a notice of intent to reopen is provided to the permittee by Ecology at least 30 days in advance of the date that this permit is to be reopened, except that Ecology may provide a shorter period of time in the case of an emergency.

iv) All permit conditions remain in effect until such time as Ecology takes final action.

[WAC 173-401-730]

r) Off-Permit Changes

The permittee is allowed to make certain changes that are not specifically addressed or prohibited by this permit without a permit revision. All such changes must meet the following conditions:

i) The proposed changes must not weaken the enforceability of any existing permit condition.

ii) Each such change must meet all applicable requirements and must not violate any existing permit term or condition.

iii) Before or contemporaneously with making the permit change, the permittee must provide written notice to Ecology and EPA Region 10 at the respective addresses included in this permit. Such written notice must describe each such change, including the date, any change in emissions or pollutants emitted, and any applicable requirements that would apply as a result of the change.

iv) The change must not qualify for the permit shield under Condition 1(a).

v) The permittee must keep a record of all changes that result in emissions of any regulated air pollutant subject to any applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes. The record must reside at the permitted facility.

vi) A source making a change under this section must comply with the preconstruction review requirements established pursuant to Condition 1(t).

[WAC 173-401-724]

s) Changes not Requiring Permit Revisions

i) Section 502(b)(10) changes

The permittee is authorized to make section 502(b)(10) changes, as defined in WAC 173-401-200(30), without a permit revision, providing the conditions included below are met. The permit shield as described in Condition 1(a) will not apply to any change made pursuant to this paragraph.

i. The proposed changes are not Title I (FCAA) modifications.

ii. The proposed changes do not result in emissions which exceed those allowable under the permit, whether expressed as a rate of emissions, or in total emissions.

iii. The proposed changes do not alter permit terms that are necessary to enforce limitation on emissions from units covered by the permit.

iv. The facility provides Ecology and EPA with written notification at least seven days prior to making the proposed changes except that written notification of a change made in response to an emergency must be provided as soon as possible after the event.

(a) The written notification must include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

ii) Changes related to Emissions trading under an emissions cap

Pursuant to Condition 1(s)(i), the permittee is authorized to trade increases and decreases in emission in the permitted facility, where the Washington state implementation plan provides for such emissions trades without requiring a permit revision. This provision is available in those cases where the permit does not already provide for such emissions trading. Such changes will be subject to the following:

i. The written notification required under Condition 1(s)(i)(iv) must include such information as may be required by the provision in the Washington SIP authorizing the emissions trade, including at a minimum, when the proposed change will occur, a description of each such change, any change in emissions, the permit requirements with which the source will comply using the emissions trading provisions of the Washington SIP, and the pollutants emitted subject to the emissions trade. The notice must also refer to the provisions with which the source will comply in the applicable implementation plan and that provide for the emissions trade. The notification must state how any increases or decreases in emissions will comply with the terms and conditions of the permit. (The permit shield described under Condition 1(a) will extend to terms and conditions that allow such increases and decreases.)

ii. The permit shield described in Condition 1(a) will not extend to any change made under this paragraph. Compliance with the permit requirements that the source will meet using the emissions trade will be determined according to requirements of the applicable implementation plan authorizing the emissions trade.

iii. Upon the request of the permit applicant, Ecology will issue permits that contain terms and conditions, including all terms required under WAC 173-401-600 through 173-401-630 to determine compliance, allowing for the trading of emissions increases and decreases in the chapter 173-401 WAC source solely for the purpose of complying with a federally enforceable emissions cap that is established in the permit independent of otherwise applicable requirements. The permit applicant must include in its application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The emissions trading provision will not be applied to any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades. The permit will also require compliance with all applicable requirements.

iv. A source making a change under this section must comply with applicable preconstruction review requirements established pursuant to Condition 1(t).

v. No permit revision will be required, under any approved economic incentives, marketable permits, and other similar programs or processes for changes that are provided for in this permit, such as emissions trading.

[WAC 173-401-722], [WAC 173-401-620(2)(g)]

t) New Source Review

The permittee must not construct new sources or make modifications required to be reviewed under WAC 173-400-110, WAC 173-400-113, 173-400-720, or WAC 173-460 before the permittee obtains written final approval from Ecology in accordance with those regulations, pays the appropriate fees required by WAC 173-455-120, and pays the cost of public notice described in WAC 173-400-171.

[WAC 173-400-110], [WAC 173-400-113], [WAC 173-400-116], [WAC 173-400-171], [WAC 173-455-120], [WAC 173-400-720], [WAC 173-460], [RCW 70A.15.2210]

u) Replacement or Substantial Alteration of Emission Control Technology

Prior to replacing or substantially altering emission control technology subject to review under WAC 173-400-114, the permittee must file for and obtain approval from Ecology according to that regulation. The permittee must pay the appropriate fees required by WAC 173-455-100(4)(a) prior to commencing construction.

[WAC 173-455-100], [WAC 173-400-114], [RCW 70A.15.2220]

v) Operational Flexibility

i) In the event that an emission unit is not operated during a period equal to or greater than the monitoring period designated, no monitoring is required. Recordkeeping and reporting must note the reason why and length of time that the emission unit was not operated.

ii) The permittee did not propose any further alternative operating scenarios.

[WAC 173-401-650]

w) Permit Appeals

This permit or any conditions in it may be appealed only by filing an appeal with the pollution control hearings board and serving it on the permitting authority within thirty days of receipt pursuant to RCW 43.21B.310. This provision for appeal in this section is separate from and additional to any federal rights to petition and review under § 505(b) of the FCAA.

The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this permit:

i) File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

ii) Serve a copy of your appeal and this permit on Ecology in paper form – by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Address and Location Information

Street Addresses

Department of Ecology
Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Pollution Control Hearings Board
1111 Israel Road SW Ste. 301
Tumwater, WA 98501

Mailing Addresses

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

Pollution Control Hearings Board
PO Box 40903
Olympia, WA 98504-0903

Pchb-shbappeals@eluho.wa.gov

[WAC 173-401-620(2)(i)]

x) Federal Chlorofluorocarbons (CFC) Requirements – Title VI of the FCAA

i) The permittee must comply with the following standards for recycling and emissions reductions pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in subpart B.

i. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

ii. Equipment used during the maintenance, service, repair, or disposal must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

iii. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

iv. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to 40 CFR 82.166. (“MVAC-like appliance” is defined at 40 CFR 82.152.)

v. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156.

vi. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added. The owner/operator must keep records of refrigerant purchased and added to such appliances in cases where owners add their own refrigerant. Such records must indicate the date(s) when refrigerant is added pursuant to 40 CFR 82.166.

vii. Persons conducting maintenance, service, repair, or disposal of appliances must follow the prohibitions pursuant to 40 CFR 82.154.

viii. Person performing maintenance, service, repair, or disposal of appliances must certify to the Administrator that such person has acquired certified recovery of recycling equipment pursuant to 40 CFR 82.162.

ii) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR 82, Subpart A – Production and Consumption Controls.

iii) If the permittee performs a service on monitor (fleet) vehicles and when this service involves ozone depleting substance refrigerant in the MVAC, the permittee is subject to all applicable requirements as specified in 40 CFR 82, Subpart B – Servicing of Motor Vehicle Air Conditioners.

iv) The permittee will be allowed to switch from any ozone depleting substance to any alternative that is listed in the Significant New Alternative Program promulgated pursuant to 40 CFR 82, Subpart G – Significant New Alternative Policy Program.

[40 CFR 82], [RCW 70A.15.6410], [RCW 70A.15.6420]

y) Reasonably Available Control Technology (RACT)

Emission standards and other requirements contained in rules or regulatory orders in effect at the time of operating permit issuance or renewal will be considered RACT for the purpose of permit issuance or renewal. RACT determinations under section 8, chapter 252, Laws of 1993 must be incorporated into an operating permit as provided in WAC 173-401-730.

[WAC 173-401-605(3)], [RCW 70A.15.2230]

z) Compliance Schedules

The permittee must continue to comply with applicable requirements with which it is currently in compliance. The permittee must meet applicable requirements on a timely basis that become effective during the permit term.

[WAC 173-401-510(2)(h)(iii)(A)], [WAC 173-401-510(2)(h)(iii)(B)]

aa) Record Keeping

i) The permittee must keep records of required monitoring information that includes, where applicable, the following:

i. The date, place, and time of the sampling or measurements.

ii. The date(s) analyses were performed.

iii. The company or entity that performed the analyses.

iv. The analytical techniques or methods used.

v. The results of such analyses.

vi. The operating conditions as existing at the time of sampling or measurement.

[WAC 173-401-615(2)(a)]

ii) The permittee must keep records describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

[WAC 173-401-615(2)(b)]

iii) The permittee must retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings from continuous monitoring instrumentation, and copies of all reports required by this permit.

[WAC 173-401-615(2)(c)]

iv) All required recordkeeping must be available to Ecology in accordance with Condition 1(f).

[WAC 173-401-630(2)(b)]

bb) General Obligation

Nothing in this permit will alter or affect the following:

i) The provisions of section 303 of the FCAA (emergency orders), including the authority of EPA under that section.

ii) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

iii) The applicable requirements of the acid rain program, consistent with section 408(a) of the FCAA.

iv) The ability of EPA to obtain information from a source pursuant to section 114 of the FCAA.

v) The ability of Ecology to establish or revise requirements for the use of reasonably available control technology (RACT) as provided in chapter 252, Laws of 1993.

[WAC 173-401-640(4)]

cc) Permit Renewal and Expiration

This permit is issued for a fixed term of five years. The permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application (as outlined in WAC 173-401-510) is submitted at least 12 months, but no greater than 18 months prior to the date of permit expiration.

A complete renewal application is due no later than DATE, 2029.

Upon receipt of a timely and complete application for renewal, this source may continue to operate subject to final action by Ecology on the renewal application. This allowance will cease to apply if, subsequent to a completeness determination, the applicant fails to submit by the deadline specified in writing by Ecology, any additional information identified as being needed to process the application. The application must be sent to Ecology at the address included in this permit.

[WAC 173-401-610; 173-401-710]

dd) Demolition and Renovation (asbestos)

Prior to, during and after conducting any activity to which 40 CFR 61, Subpart M – National Emission Standard for Asbestos, applies, the permittee must comply with the requirements of that rule. Such activities include notification, demolition, renovation, asbestos stripping or removal, installing or reinstalling insulation, manufacturing of certain items, spraying of certain materials, constructing roadways of certain materials, or disposal.

[40 CFR 61, Subpart M], [WAC 173-400-075(1)]

2. Applicable Requirements

Until this permit expires, is modified, or revoked, this permittee is authorized to operate the air emission units and processes outlined in Sections 2(a) through 2(b). These emission units and processes are subject to the conditions included in Sections 2(a), through 2(b), to the MRRR's listed in Section 3, and to other terms and conditions specified in this permit.

The column entitled **Description** in each table contains only a summary/paraphrase of the condition, emission standard or work practice. The condition, emission standard, or work practice itself is the enforceable requirement and must be referenced for actual language.

Testing Requirements

Although there are many conditions with no on-going testing requirements, Ecology retains the authority to conduct or require that testing be conducted at the facility with respect to these conditions per WAC 173-400-105(4). Identification of the appropriate test method is necessary to make emission limits fully enforceable. Where the underlying applicable requirement does not specify the test method, Ecology has done so in this permit.

[WAC 173-401-615(1)(a)], [WAC 173-401-630(1)], [WAC 173-400-105(4)]

a) Facility Wide

This section is applicable and enforceable with respect to all emission units source wide, including those emission units in Sections 2(b). Monitoring, recordkeeping, and reporting requirements in this section do not apply to insignificant emission units. Condition numbers denoted with an asterisk indicate that streamlining of a less stringent requirement has taken place and is described in section 17.0 of the Statement of Basis.

Table 2(a) Source-Wide Applicable Requirements

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.1.1	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (2)(a)	S	The Ephrata Landfill is limited to a landfill with a section closed in 2004 and an active section (Phases 1 and 2) that initially received waste in 2004 and that will close once it has received an additional	None	None

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			1,433,545 tons of waste (estimated to occur in 2021), and a new active section (Phases 3 and 4), that will begin accepting waste when Phases 1 and 2 are completed, and cease to accept waste when the Ephrata Landfill's overall capacity of 3.3 million Mg of waste (roughly 3.6 million tons) is reached (estimated to occur in 2035.		
2.1.2	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (2)(b)	S	The Ephrata Landfill is limited to one flare designed for a range of flows from 25 to 1,300 scfm landfill gas.	None	None
2.1.3	Order No. 19AQ-E051; Issued 9/9/2019, Approval Conditions (3)(a), 12(a)	S	There shall be no visible emissions (zero percent opacity) from landfill operations at the property boundary of the site. No visible emissions from the source shall be detectable offsite.	RM9	3.a.i, 3.a.ii
2.1.4	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (3)(b)	S	Visible emissions on-site in the vicinity of the landfill's operations shall not exceed 20 percent for any three minute period as measured by EPA Method 9.	RM9	3.a.ii, 3.a.v
2.1.5	Order No. 19AQ-E051; Issued 9/9/2019,	S	Internal haul roads used by garbage trucks and other vehicles that also drive off the facility shall be treated	None	3.a.iii

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
	Approval Condition (5)(g)		in accordance with the Ephrata Landfill Fugitive Dust Control Plan.		
2.1.6	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (7)(g)	S	Equipment shall be operated and maintained by personnel properly trained in its operation.	None	3.b
2.1.7	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (7)(h)	S	Equipment shall be properly maintained and kept in good operating condition at all times.	None	3.a.i
2.1.8	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (2)(d) WAC 173-400-040(5)	S	Any person who shall cause or allow the generation of any odor from any source or activity which may unreasonably interfere with any other property owner's use and enjoyment of their property must use recognized good practice and procedures to reduce these odors to a reasonable minimum.	None	3.a.i, 3.a.iv, 3.a.v
2.1.9	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (9)	S	Permittee shall submit by no later than January 31 of each year, an annual summary of air contaminant emissions for the previous calendar year, including fugitive dust from roads, flare emissions and landfill gas fugitive emissions, and annual total	None	None

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			tonnage of waste received by the landfill.		
2.1.10	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (12)(b)	S	Commencing/Discontinuing Construction and/or Operations - Approval Order 19AQ-E051shall become invalid if construction of the equipment described in the NOC application is not commenced within 18 months after receipt of the Approval Order. If construction or operation of a portion or all of the equipment described in the NOC application is discontinued for a period of 18 months, the portion of the Approval Order regulating the inactive equipment shall become invalid. Ecology may extend the 18-month period upon a satisfactory showing that an extension is justified.	None	None
2.1.11	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (12)(c)	S	Compliance Assurance Access - Access to the source by EPA or Ecology shall be allowed for the purposes of compliance assurance inspections. Failure to allow access is grounds for revocation of this Approval Order and enforcement under applicable regulations	None	None
2.1.12	Order No. 19AQ-E051; Issued	S	Availability of this Approval Order - Legible copies of this Approval Order shall be	None	None

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
	9/9/2019, Approval Condition (12)(d)		available to employees directly involved in operation of the facilities and shall be available for review upon request by Ecology		
2.1.13	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (12)(e) WAC 173-400-101(4)	S	Equipment Operation - Operation of the facilities shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M and FDCP manual.	None	3.a.iii, 3.b
2.1.14	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (12)(f)	S	Activities Inconsistent with this Approval Order - Any activity undertaken by the permittee or others, in a manner that is inconsistent with information in the NOC application or this Approval Order, shall be subject to Ecology enforcement under applicable regulations.	None	None
2.1.15	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (12)(g)	S	Obligations under Other Laws or Regulations - This Approval Order shall not be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.	None	None
2.1.16	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (2)(c)	S	The permittee shall keep sufficient records of the weight of refuse accepted to enable Ecology inspectors to verify at any time how much total refuse	None	3.v

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			has been accepted by the landfill.		
2.1.17	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (4)(e)	S	Surface monitoring described in Condition 3(d) of this Order shall be performed quarterly to assess the performance of the gas collection system in the active portion of the landfill until such time as the passive flare is disposing of the gas generated in the active sections. If a reading above 1,250 parts per million (ppm) methane is obtained, retesting shall be conducted within ten working days. If the retesting obtains a result above 1,250 ppm methane, the permittee shall expand or alter the landfill gas collection system to provide additional collection (e.g., by adding additional collection equipment or control device(s)), and / or shall improve the condition of the landfill cover.	None	3.a.vii.1
2.1.18	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (4)(f)	S	After the active landfill gases are being disposed of by the flare, a composite sample of the gas entering the system from the active landfill shall be collected in a summa canister and analyzed for non-methane organic compounds	None	3.a.vii.1

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			(NMOC) and by Method TO-15A, or other methods agreed to in advance by Ecology. If the results of these analyses demonstrate that total NMOC concentrations from the active side of the system are less than 600 ppmv, and WAC 173-460 TAPs are less than the Small Quantity Emission Rates (SQERs), the surface surveys required in Condition 4(e) may be discontinued. Sampling and analysis for NMOC and TO-15A targets shall be repeated at each increase of 100 cfm above initial flow of landfill gas to the flare.		
2.1.19	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (4)(g)	S	In the event that passive collection results in landfill gas flow of 1,000 scfm or greater, the landfill gas collection system shall be converted to an active system within one year of the date on which the flow first read 1,000 scfm or greater, or additional or improved flaring capacity shall be installed. Modifications to the flaring and proposed collection system require an NOC application and modified Approval Order for this project.	None	3.a.vii.1

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.1.20	WAC 173-400-040(1)	F	All emission units are required to use reasonably available control technology (RACT)	None	None
2.1.21	WAC 173-400-200(2) 2/10/05	S	No use of excess stack height or dispersion techniques shall be used to meet ambient air quality standards or prevention of significant deterioration (PSD) increments.	None	None
2.1.22	WAC 173-400-205	F	No varying of emissions according to atmospheric conditions or ambient concentrations, except as directed according to air pollution episode regulations.	None	None
2.1.23	WAC 173-400-040(2)	S	Permittee shall not cause or allow the emission for more than three minutes, in any one hour, of an air contaminant from any emissions unit which at the emission point, or within a reasonable distance of the emission point, exceeds twenty percent opacity as determined by Washington State Department of Ecology (Ecology) method 9A.	RM9	3.a.i, 3.a.ii
2.1.24	WAC 173-400-040(3)	S	Permittee shall not cause or allow the emission of particulate matter from any source to be deposited beyond the property line in sufficient quantity to interfere unreasonably with the use and enjoyment of	RM9	3.a.i, 3.a.ii, 3.a.v

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			the property upon which the material is deposited.		
2.1.25	WAC 173-400-040(4)	S	Permittee shall take reasonable precautions to prevent the release of fugitive emissions.	RM9	3.a.i, 3.a.ii, 3.a.v
2.1.26	WAC 173-400-040(6)	F	Permittee shall not cause or allow the emission of any air contaminant from the facility if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.	None	3.a.i, 3.a.v
2.1.27	WAC 173-400-040(7)	F	Permittee shall not permit or allow emission of SO2 in excess of 1,000 ppmv (dry) corrected to 7 percent O2 for fuel burning equipment.	RM6C	None
2.1.28	WAC 173-400-040(9)(a)	F	Permittee shall take reasonable precautions to prevent fugitive dust from becoming airborne and must operate the facility so as to minimize fugitive dust emissions.	RM9	3.a.iii
2.1.29	WAC 173-400-040(9)(b)	F	The owner or operator of any existing source or activity that generates fugitive dust that has been identified as a significant contributor to a PM10 or PM2.5 nonattainment area is required to use reasonably available control technology to control emissions.	None	None
2.1.30	RCW 70A.15.1070	S	Unlawful for any person to cause air pollution or permit it to be caused in	None	None

Condition Number	Condition or Emission Standard	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			violation of this chapter, or of any ordinance, resolution, rule or regulation validly promulgated hereunder.		

b) Solid Waste Landfill

TABLE 2(b) – The following applicable requirements apply to the SOLID WASTE LANDFILL

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.2.1	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (3)(d)	S	Emissions of landfill gas shall be controlled so that the monitored methane concentration is less than 1,250 ppmv at the surface of the active portion of the landfill. The inactive (closed) portion of the landfill shall be monitored at the perimeter wells and off-fill buildings at which points the methane concentration shall not exceed five percent by volume.	RM21	3.a.vii.3.c
2.2.2	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (4)(a)	S	Permittee shall install a collection system in each cell, no later than 60 days after the date on which the initial solid waste has been in place for a period of five years or more if active, or two years or more if closed or at final grade; except that cells meeting the above criteria, at the time of issuance of this	None	None

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			Order, shall have the collection system installed no later than March 7, 2020.		
2.2.3	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (4)(b)	S	Permittee shall operate the collection system such that all collected landfill gas is vented to the flare.	None	3.d.iv.1, 3.d.vi.4
2.2.4	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (4)(c)	S	Permittee shall operate the flare at all times when the collected gas is routed to the system.	None	3.d.iv.3, 3.d.vi.2, 3.d.vi.3
2.2.5	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (4)(d)	S	Permittee shall design any passive gas collection system with flexibility to permit future alteration to an active gas collection system.	None	None
2.2.6	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (5)(a)	S	A gas flow meter shall be installed at the main-line piping connections at the flare station.	None	3.d.iv.3, 3.d.vi.2, 3.d.vi.3
2.2.7	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (5)(b)	S	Ecology approved daily cover shall be placed over the entire working face at the end of each working day.	None	3.a.vii.2.a
2.2.8	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (5)(c)	S	Intermediate cover, at least 12 inches in thickness, shall be placed on areas that have received waste but will be inactive for a period longer than 180 days.	None	3.a.vii.2.b
2.2.9	Order No. 19AQ-E051; Issued 9/9/2019,	S	Final cover shall be placed over areas that have reached full	None	3.a.vii.1, 3.d.iii.3, 3.d.iii.4

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
	Approval Condition (5)(d)		capacity and final waste grades.		
2.2.10	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (5)(e)	S	An active LFG gas collection system shall be installed and operated in accordance with the requirements of 40 CFR 60 Subpart XXX.	None	3.d.iv.1, 3.d.vi.4, 3.d.vii
2.2.11	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (5)(f)	S	The existing flare shall be operated in accordance with the requirements of Subparts A and XXX of 40 CFR 60.	None	3.d.iv.3, 3.d.vi.2, 3.d.vi.3
2.2.12	Order No. 19AQ-E051; Issued 9/9/2019, Approval Condition (3)(c)	S	Visible emissions from the flare shall not exceed five percent opacity.	RM9	3.a.vii.3.a, 3.d.iv.3, 3.d.vi.2, 3.d.vi.3
2.2.13	40 CFR 60.11(d)	F	Operate consistent with good air pollution practice for minimizing emissions.	None	3.a
2.2.14	40 CFR 60.760(a)	F	The provisions of Subpart XXX of 40 CFR 60 apply to each municipal solid waste (MSW) landfill that commenced construction, reconstruction, or modification after July 17, 2014. Physical or operational changes made to an MSW landfill solely to comply with subparts Cc, Cf, or WWW of this part are not considered construction, reconstruction, or	None	3.d.i, 3.d.ii, 3.d.iii, 3.d.iv, 3.d.v, 3.d.vi, 3.d.vii

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			modification for the purposes of §60.760.		
2.2.15	40 CFR 60.760(b)	F	The following authorities in Subpart XXX of 40 CFR 60 are retained by the Administrator and are not transferred to the state: §60.764(a)(5). NOTE: §60.764(a)(5) concerns "other methods" that might be used to determine the NMOC concentration or a site-specific methane generation rate constant and may only be approved by the EPA. §60.764(a)(5) has not been included in this air operating permit. "The administrator" has been changed to "Ecology" in all citations of Subpart XXX of 40 CFR 60 in this AOP application.	None	None
2.2.16	40 CFR 60.761	F	All definitions apply.	None	None
2.2.17	40 CFR 60.762(a)	F	(a) Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume must submit an initial design capacity report to Ecology as provided in §60.767(a). The landfill may calculate design	None	3.d.v.1, 3.d.vi.6

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions must be documented and submitted with the report. Submittal of the initial design capacity report fulfills the requirements of this subpart except as provided for in paragraphs (a)(1) and (2) of this section. (1) The owner or operator must submit to Ecology an amended design capacity report, as provided for in §60.767(a)(3). (2) When an increase in the maximum design capacity of a landfill exempted from the provisions of §§60.762(b) through 60.769 on the basis of the design capacity exemption in paragraph (a) of this section results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator must comply with the provisions of paragraph (b) of this section.		

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.2.18	40 CFR 60.762(b)	F	Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, must either comply with paragraph (b)(2) of §60.762 or calculate an NMOC emission rate for the landfill using the procedures specified in §60.764. The NMOC emission rate must be recalculated annually, except as provided in §60.767(b)(1)(ii). The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.	None	3.d.v.1, 3.d.vi.6
2.2.19	40 CFR 60.762(b)(2(ii), 40 CFR 63.1959(b)(2)(ii)	F	Install and operate a collection and control system that captures the gas generated within the landfill. An active collection system must: (1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the	RM2E, RM25 or RM25C	3.d.iii.1, 3.d.v.3, 3.d.vi.1, 3.d.vii

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			intended use period of the gas control system equipment; (2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of five years or more if active; or 2 years or more if closed or at final grade; (3) Collect gas at a sufficient extraction rate; (4) Be designed to minimize off-site migration of subsurface gas. A passive collection system must: (1) Comply with the provisions specified in paragraphs (1), (2), and (3) for the active collection system required above. (2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners must be installed as required under 40 CFR 258.40.		
2.2.20	40 CFR 60.762(b)(2(iii), 40 CFR 63.1959(b)(2)(iii)	F	Route the collected LFG to a control system that is: (A) An open (non-enclosed) flare designed and operated in accordance with the parameters established in §60.18 or §63.11(b) except as noted in	Open Flare: RM3C; Enclosed Flare: RM25 or RM25C & RM3,	3.d.vi, 3.d.vii Open Flare: 3.d.ii.5, 3.d.iv.3 Enclosed Flare: 3.d.ii.4, 3.d.iv.2

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			§60.764(e) or §63.1959(e); or (B) An enclosed flare designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3-percent oxygen; or (C) A treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-British thermal unit (Btu) gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either paragraph (A) or (B) of this requirement.	RM3A, or RM3C	

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.2.21	40 CFR 60.762(b)(2)(iv)	F	Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§60.763, 60.765, and 60.766 of Subpart XXX of 40 CFR 60; or the provisions of §§63.1958, 63.1960, and 63.1961 of Subpart AAA of 40 CFR 63. Once the permittee begins to comply with the provisions of §§63.1958, 63.1960, and 63.1961, the permittee must continue to operate the collection and control device according to those provisions and cannot return to the provisions of §§60.763, 60.765, and 60.766. Note: Ephrata Landfill hasn't begun to comply with the provisions of §§63.1958, 63.1960, and 63.1961, so will comply with this subpart in accordance with the provisions of §§60.763, 60.765, and 60.766.	None	3.d.i, 3.d.iii, 3.d4.iv, 3.d.vi
2.2.22	40 CFR 60.762(c) & (d)	F	The permittee shall maintain an air operating permit under Title V until the landfill is closed.	None	None

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.2.23	40 CFR 60.763(a)	F	The permittee must operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for five years or more if active; or two years or more if closed or at final grade.	None	3.d.iii.1, 3.d.iii.2, 3.d.v.3
2.2.24	40 CFR 60.763(b)	F	The permittee must operate the collection system with negative pressure at each wellhead except under the following conditions: (1) A fire or increased well temperature. The owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the annual reports as provided in §60.767(g)(1); (2) Use of a geomembrane or synthetic cover. The owner or operator must develop acceptable pressure limits in the design plan; (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate	None	3.d.iii.1

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			for declining flows. All design changes must be approved by Ecology as specified in §60.767(c).		
2.2.25	40 CFR 60.763(c)	F	The permittee must operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit). The owner or operator may establish a higher operating temperature value at a particular well.	None	3.d.iii.1
2.2.26	40 CFR 60.763(d)	F	The permittee must operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, permittee must conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in §60.765(d). The permittee must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the	RM21	3.d.iii.3, 3.d.iii.4

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover and all cover penetrations. Thus, the permittee must monitor any openings that are within an area of the landfill where waste has been placed, and a gas collection system is required.		
2.2.27	40 CFR 60.763(e)	F	Operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.762(b)(2)(iii) or §63.1959(b)(2)(iii). In the event the collection or control system is not operating, the gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour of the collection or control system not operating and efforts to repair the collection or control system must	None	3.d.iii.5

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			be initiated and completed in a manner such that downtime is kept to a minimum and the collection or control system must be returned to operation.		
2.2.28	40 CFR 60.763(f), 40 CFR 60.763(g)	F	Operate the control system at all times when the collected LFG is routed to the system. If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of §60.763 are not met, corrective action must be taken as specified in §60.765(a)(3) and (5) or (c). If corrective actions are taken as specified in §60.765, the monitored exceedance is not a violation of the operational requirements in this section.	None	3.d.iii.1, 3.d.iii.2, 3.d.iii.3
2.2.29	40 CFR 60.765(e)	F	The provisions of 40 CFR 60 Subparts A and XXX apply at all times, including during periods of startup, shutdown, or malfunction. During periods of startup, shutdown, and malfunction, the permittee must comply with the work practice specified in §60.763(e)	None	None

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
			in lieu of the compliance provisions in §60.765.		
2.2.30	40 CFR 63.1960(e)(2)	F	The provisions of 40 CFR 63 Subparts A and AAAA apply at all times, including periods of startup, shutdown, and malfunction. During periods of startup, shutdown, and malfunction, the permittee must comply with the work practice requirement specified in §63.1958(e) in lieu of compliance provisions in §63.1960.	None	None

3. Monitoring, Recordkeeping, and Reporting Requirements (MRRR)

[WAC 173-401-630(1)], [WAC 173-401-615(1)(a), (b)]

a) Minimum Monitoring and Maintenance Requirements

i) Facility-Wide Inspections

The permittee shall conduct a facility-wide inspection at least once per calendar month. These inspections shall include checking for prohibited activities and new activities that require additional approval under Chapter 173-400 WAC. The inspections shall also examine the general state of compliance with the general applicable requirements and the general effectiveness of the O&M Plan.

The facility-wide inspection shall include an inspection of the facility for odor-bearing contaminants and emissions of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interfere with enjoyment of life and property. The permittee shall also conduct quarterly inspections for fugitive dust and track-out if there are any activities underway, such as construction, which are likely to generate fugitive dust or track-out.

The permittee shall correct any problems identified by these inspections as soon as possible, but no later than 24 hours after identification or shut down the unit or activity until the problem can be corrected or report the problem as a deviation under Section 5.6.

[WAC 173-401-615(1)]

ii) Visible Emissions

The permittee shall conduct monthly visible emissions surveys of all emission units during daylight hours as follows:

The survey shall be conducted from a location with a clear view of the emission unit and where the sun is not directly in the observer's eyes. The survey location shall be at least 15 feet but not more than 0.25 miles from the source. The survey shall be conducted when the facility is in operation. The observer will be educated in the general procedures for determining the presence of visible emissions (i.e., effects on the visibility of emissions caused by background contrast, position of the sun and amount of ambient lighting, and observer position relative to source and sun). The survey shall consist of a minimum 15-second visual observation of each emission unit to identify those emission units which exhibit visible emissions. The observer shall record the wind direction, sky condition, sun location with respect to the source and the survey location, and the time duration of the survey. If, during the scheduled inspection, or at any other time, visible emissions other than uncombined water are observed, the permittee shall, as soon as possible, but no later than within 24 hours of the initial observation, take corrective actions until there are no visible emissions, or alternatively, measure and record the opacity using Ecology Method 9A or Reference Method 9[1] or shut down the unit or activity until it can be repaired.

[WAC 173-401-615(1)]

iii) Fugitive Dust

Fugitive dust will be controlled in accordance with a Fugitive Dust Control Plan (FDCP), to be prepared by the permittee and kept on-site in a location known and accessible to employees. The FDCP shall be prepared using the guidelines in the

[1] The test procedures for EPA Method 9 and Ecology Method 9A are identical; the differences come in the method of determining compliance with the opacity standard. EPA Method 9 states: "For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. The default EPA Method 9 emission standard is based upon an averaging time for 24 observations, made over a period of six minutes, unless the applicable standard specifically calls out a different averaging time." The Ecology Method 9A emission standard is based on three minutes (12-observations) exceeding the applicable opacity limit over a one-hour period.

document EPA-450/3-88-008 and may be incorporated into the O&M Manual required in Section 3.2 [Cond. 11(a), AO 19AQ-E051 9/19/2019]

i. The FDCP shall be complete no later than 11/18/2019 and shall be reviewed and updated (if necessary) annually. [Cond. 11(b), AO 19AQ-E051 9/19/2019]

ii. The FDCP shall include, but not be limited to, the following:

iii. Fugitive dust control strategies for paved and unpaved surfaces on which travel by rubber-tired vehicles occurs.

iv. Management of the active area to control fugitive dust by dust suppressing substances, covering, compacting, and windbreak construction.

v. Control of vehicle track-out onto offsite paved roads. This shall be accomplished by tire washing or rumble bars for rubber-tired vehicles as they leave the site or by alternative methods proposed by the permittee and approved in writing by Ecology.

[Cond. 11(c), AO 19AQ-E051 9/19/2019]

iv) Odor

In the event that odor from the project is detected beyond the property boundary corrective action shall be taken or commenced by the permittee as soon as possible but no later than within three working days. Permittee shall keep records and notify Ecology as required by Cond. 7(i), AO 19AQ-E051. In the event that odor is detected beyond the property boundary following corrective action, Ecology may order the permittee to take specific measures to control odor. These measures may include, but are not limited to, restrictions on the size of the active face, enclosure of the active face, modifications to gas or leachate collection or control systems and limitations on the amount of solid waste received by the landfill. [Cond. 2(d), AO 19AQ-E051 9/19/2019]

v) Compliant Response

The permittee shall record and investigate air pollution complaints as soon as possible, but no later than three business days after receipt. Upon receiving a complaint, the permittee shall record:

i. The date and time of the complaint,

ii. The name of the person complaining, if known,

iii. The nature of the complaint, and

iv. The date, time and nature of any corrective action taken.

The permittee shall also identify complaints regarding these emissions as follows:

i. Any emissions that are, or are likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interfere with enjoyment of life and property, or

ii. Any emissions from fallout, or

iii. Any track-out onto paved roads open to the public, or

iv. Any emissions of odor-bearing air contaminants, or

v. Other emissions.

The permittee shall correct any problems identified by these inspections or complaint investigations as soon as possible, but no later than 24 hours after identification or shut down the unit or activity until it can be repaired or corrected or report the problem as a deviation under Section 3.4.5.10. [WAC 173-401-615(1), 10/17/02]

The permittee shall keep records of complaints as received from the public, Ecology, or any other entity. Complaints shall be promptly addressed (within 24 hours). Records shall be maintained of the permittee's action to investigate the complaint, and what, if any, corrective action was taken in response to the complaint. Ecology shall be notified within three (3) business days of receipt of any complaint [Cond. 7(i), AO 19AQ-E051].

vi) Maintenance and Repair of Insignificant Emission Units

The permittee shall use good industrial practices to maintain insignificant emission units[1]. For such equipment, the permittee shall also promptly repair defective equipment or shut down the unit until defective equipment can be repaired. Records under Section 5.5 are not required for such equipment except when such equipment is inspected under Section 3.1.1 and a problem requiring prompt repair is discovered during the inspection. [WAC 173-401-615(1)(b)]

vii) Ecology-Specific Monitoring, Reporting, and Recordkeeping

i. Landfill Monitoring Requirements

Surface monitoring described in Requirement EU-2.2 shall be performed quarterly to assess the performance of the gas collection system in the active portion of the landfill until such time as the passive flare is

[1] WAC 173-401-200(16) states: "Insignificant activity" or "insignificant emissions unit" means any activity or emissions unit located at a chapter 401 source which qualifies as insignificant under the criteria listed in WAC 173-401-530. These units and activities are exempt from permit program requirements except as provided in WAC 173-401-530. WAC 173-401-530 contains criteria for identifying insignificant activities and emissions units. It also states that "Designation of an emission unit or activity as insignificant for purposes of this chapter does not exempt the unit or activity from any applicable requirement."

disposing of the gas generated in the active sections. If a reading above 1,250 parts per million (ppm) methane is obtained, retesting shall be conducted within ten working days. If the retesting obtains a result above 1,250 ppm methane, the permittee shall expand or alter the landfill gas collection system to provide additional collection (e.g., by adding additional collection equipment or control device(s)), and / or shall improve the condition of the landfill cover [Cond. 4(e), AO 19AQ-E051 9/19/2019].

After the active landfill gases are being disposed of by the flare, a composite sample of the gas entering the system from the active landfill shall be collected in a summa canister and analyzed for non-methane organic compounds (NMOC) and by Method TO-15A, or other methods agreed to in advance by Ecology. If the results of these analyses demonstrate that total NMOC concentrations from the active side of the system are less than 600 ppmv, and WAC 173-460 TAPs are less than the Small Quantity Emission Rates (SQERs), the surface surveys required in condition Requirement EU-2.2 may be discontinued. Sampling and analysis for NMOC and TO-15A targets shall be repeated at each increase of 100 cfm above initial flow of landfill gas to the flare [Cond. 4(f), AO 19AQ-E051 9/19/2019].

In the event that passive collection results in landfill gas flow of 1,000 scfm or greater, the landfill gas collection system shall be converted to an active system within one year of the date on which the flow first read 1,000 scfm or greater, or additional or improved flaring capacity shall be installed. Modifications to the flaring and proposed collection system require an NOC application and modified Approval Order for this project [Cond. 4(g), AO 19AQ-E051 9/19/2019].

ii. Landfill Cover Operational Requirements

(a) Daily Covering of Active Face Monitoring

The permittee shall submit to Ecology, by letter or by email, a description of materials proposed for working face daily cover. Only those materials that have been approved by Ecology, in writing or by email, may be used to cover the working face at the end of each working day.

At the end of each working day, the permittee shall inspect the working face of the landfill to ensure that the approved daily cover has been applied. The permittee shall record the results of this daily inspection.

[Cond. 5(b), AO 19AQ-E051 9/19/2019]

(b) Intermediate Cover Monitoring

Permittee shall inspect areas that have received waste but will be inactive for a period longer than 180-days for placement of intermediate cover on a monthly basis and shall record the results of this monthly inspection. [Cond. 5(c), AO 19AQ-E051 9/19/2019]

iii. Testing Method Requirements

(a) Visible Emissions Testing

Visible emissions from the landfill operations shall be measured by EPA Method 9 of Title 40, Code of Federal Regulations, Part 60, Appendix A-4 [Cond. 6(a), AO 19AQ-E051 9/19/2019].

Visible emissions from the Flare shall be measured by EPA Method 22 of Title 40, Code of Federal Regulations, Part 60, Appendix A-7 [Cond. 6(b), AO 19AQ-E051 9/19/2019].

(b) Periodic Testing of Flare Emissions

Periodic testing of flare emissions is not required in this Approval Order. Ecology may require flare emission testing in the future in accordance with WAC 173-400-105(4). For the purpose of future flare emission testing the permittee shall install a stack on the open flare that satisfies the criteria in 40 CFR 60, Appendix A-1, Method 2 [Cond. 6(c), AO 19AQ-E051 9/19/2019].

(c) Visible Emissions Testing

The permittee shall retain an independent testing firm to monitor surface concentrations of methane along the entire perimeter of the final cover area and along a pattern that traverses the landfill cover at 30-meter intervals (or a site-specific spacing proposed by the permittee in writing and approved by Ecology in writing in advance of testing) on a quarterly basis. If monitoring for four consecutive quarters do not result in any reading greater than 1,250 ppmv methane, the test frequency may be reduced to once per year. If any annual monitoring result exceeds 1,250 ppmv methane, the monitoring schedule shall return to once per quarter until four consecutive quarters results do not result in any reading greater than 1,250 ppmv methane [Cond. 7(b)(i), AO 19AQ-E051 9/19/2019].

Surface monitoring shall be conducted using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the following specifications:

The portable analyzer shall meet the instrument specifications provided in section 6 of Method 21 of Appendix A-7, Title 40 Part 60 Code of Federal Regulations, except that "methane" shall replace all references to VOC.

The calibration gas shall be methane, diluted to a nominal concentration of 1,250 parts per million in air.

To meet the performance evaluation requirements of section 6 of Method 21 of Appendix A-7, Title 40 Part 60 Code of Federal Regulations, the instrument evaluation procedures of section 8 of Method 21 of Appendix A-7, Title 40 Part 60 Code of Federal Regulations shall be used.

[Cond. 7(b)(ii), AO 19AQ-E051 9/19/2019]

The calibration procedures provided in section 10 of Method 21 of Appendix A-7, Title 40 Part 60 Code of Federal Regulations shall be followed immediately before commencing a surface monitoring survey [Cond. 7(b)(iii), AO 19AQ-E051 9/19/2019].

Surface emission monitoring shall be performed in accordance with section 8.3.1 of Method 21 of Title 40 Part 60 Code of Federal Regulations, Appendix A-7, except that the probe inlet shall be placed within five to ten centimeters (2-4 inches) off the ground [Cond. 7(c), AO 19AQ-E051 9/19/2019].

b) O&M Manual Requirements

Operational and maintenance plan. Owners or operators of registered sources within ecology's jurisdiction must maintain an operation and maintenance plan for process and control equipment. The plan must reflect good industrial practice and must include a record of performance and periodic inspections of process and control equipment. In most instances, a manufacturer's operations manual or an equipment operation schedule may be considered a sufficient operation and maintenance plan. The source owner or operator must review and update the plan at least annually. The source owner or operator must make a copy of the plan available to ecology upon request. [WAC 173-400-101(4)]

A source specific Operations and Maintenance (O&M) manual shall be developed and followed. Manufacturer's instructions may be referenced. O&M manual development shall be completed no later than 11/18/2019. The O&M manual shall be reviewed no

less than annually and updated as necessary. The O&M Manual shall be kept on-site in a location readily accessible to employees. The O&M manual shall at a minimum include:

i) Normal operating parameters for the gas collection and control system(s).

ii) Specifications for calibration and operation and quality assurance protocols for monitoring equipment required in this approval. This includes but is not limited to the required landfill gas flow meter.

iii) A maintenance schedule for the emission units.

iv) Monitoring and recordkeeping requirements.

v) A description of the monitoring procedures.

vi) Actions to be taken in the event of abnormal landfill gas flaring system operation, including but not limited to requirements for reporting to Ecology any breakdown or malfunction which results in the emission of untreated landfill gas to the environment. Remedial measures to be taken to eliminate uncontrolled release of landfill gas and prevent further emissions into the atmosphere.

[Cond. 10(a), AO 19AQ-E051 9/19/2019

c) New Source Performance Standard (NSPS) 40 CFR 60 Subpart A

The permittee shall furnish the EPA Administrator written notification of activities listed in 40 CFR 60.7(a) and (b). The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected source; any malfunction in the air pollution control equipment; or any periods during which a monitoring device is inoperative. Each summary report form shall contain this information and be in the format described in 40 CFR 60.7(d). For the purposes of this requirement, the EPA Administrator shall be Ecology at:

Washington Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, Washington 99205-1295

[40 CFR 60.7]

d) NSPS 40 CFR 60 Subpart XXX

i) Operational Standards for Collection and Control Systems

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of §60.762(b)(2) must:

i. Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(a) Five years or more if active; or

(b) Two years or more if closed or at final grade.

ii. Operate the collection system with negative pressure at each wellhead except under the following conditions:

(a) A fire or increased well temperature. The owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the annual reports as provided in §60.767(g)(1);

(b) Use of a geomembrane or synthetic cover. The owner or operator must develop acceptable pressure limits in the design plan;

(c) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes must be approved by Ecology as specified in §60.767(c);

iii. Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit). The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted to Ecology for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (i.e., neither causing fires nor killing methanogens is acceptable).

iv. Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator must conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in §60.765(d). The owner or operator must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover and all cover penetrations. Thus, the owner or operator must monitor any openings that are within an area of the landfill where waste has been placed and a gas collection system is required. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan must be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

v. Operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.762(b)(2)(iii). In the event the collection or control system is not operating, the gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within one hour of the collection or control system not operating; and

vi. Operate the control system at all times when the collected gas is routed to the system.

vii. If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action must be taken as specified in §60.765(a)(3) and (5) or (c). If corrective actions are taken as specified in §60.765, the monitored exceedance is not a violation of the operational requirements in this section.

[40 CFR 60.763]

ii) Test Methods and Procedures

i. NMOC Emission Rate Before Collection and Control System Installation

(a) The permittee must calculate the NMOC emission rate using either LandGEM[1] , or Equations 1 and 2 may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i)(A) and (B) of §60.764. The values to be used in both LandGEM and Equations 1 and 2 are 0.05 per year for k, 170 cubic meters per megagram for Lo, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a 30-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the *k* value to be used is 0.02 per year.

[40 CFR 60.764(a)]

ii. NMOC Emission Rate After Collection and Control System Installation

(a) After the installation and startup of a collection and control system in compliance with this subpart, the permittee must calculate the NMOC emission rate for purposes of determining when the system can be capped, removed or decommissioned as provided in §60.762(b)(2)(v), using Equation 3:

$$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC}$$

[1] The Landfill Gas Emissions Model (LandGEM) is an automated estimation tool with a Microsoft Excel interface that can be used to estimate emissions rates for total landfill gas, methane, carbon dioxide, nonmethane organic compounds, and individual air pollutants from municipal solid waste landfills. It is available from Clean Air Technology Center Products | US EPA.

Where:

M_{NMOC} = Mass emission rate of NMOC, megagrams per year.

Q_{LFG} = Flow rate of landfill gas, cubic meters per minute.

C_{NMOC} = NMOC concentration, parts per million by volume as hexane.

- The flow rate of landfill gas, Q_{LFG}, must be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control system using a gas flow measuring device calibrated according to the provisions of section 10 of Method 2E of appendix A of this part.
- The average NMOC concentration, C_{NMOC}, must be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25 or Method 25C. The sample location on the common header pipe must be before any condensate removal or other gas refining units. The landfill owner or operator must divide the NMOC concentration from Method 25 or Method 25C of appendix A of this part by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.
- The permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by Ecology.
    - Within 60 days after the date of completing each performance test (as defined in §60.8), the owner or operator must submit the results of the performance test, including any associated fuel analyses, according to §60.767(i)(1).

[40 CFR 60.764(b)]

iii. NMOC Emission Rate for PSD Applicability

(a) When calculating emissions for Prevention of Significant Deterioration purposes, the owner or operator of each MSW landfill subject to the provisions of this subpart must estimate the NMOC emission rate for comparison to the Prevention of Significant Deterioration major source and significance levels in §§51.166 or 52.21 of this chapter using Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources (AP-42) or other approved measurement procedures.

NOTE: *The permittee has already complied with this requirement during the NOC application process and the MSW landfill was found to not be a PSD source.*

[40 CFR 60.764(c)]

iv. Performance Test for Enclosed Flare

(a) For the performance test required in §60.762(b)(2)(iii)(B), Method 25 or 25C (Method 25C may be used at the inlet only) of appendix A of this part must be used to determine compliance with the 98 weight-percent efficiency or the 20 parts per million by volume outlet concentration level, unless another method to demonstrate compliance has been approved by Ecology as provided by §60.767(c)(2). Method 3, 3A, or 3C must be used to determine oxygen for correcting the NMOC concentration as hexane to three percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. Method 18 may be used in conjunction with Method 25A on a limited basis (compound specific, e.g., methane) or Method 3C may be used to determine methane. The methane as carbon should be subtracted from the Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. The landowner or operator must divide the NMOC concentration as carbon by 6 to convert from the C_{NMOC} as carbon to C_{NMOC} as hexane. Equation 4 must be used to calculate efficiency:

$$\boldsymbol{Control\ Efficiency} = \frac{(\boldsymbol{NMOC_{in}} - \boldsymbol{NMOC_{out}})}{\boldsymbol{NMOC_{in}}}$$

Where:

$NMOC_{in}$ = Mass of NMOC entering control device.

$NMOC_{out}$ = Mass of NMOC exiting control device.

[40 CFR 60.764(d)]

v. Performance Test for Non-enclosed (Open) Flare

(a) For the performance test required in §60.762(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in §60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas

molecular weight for calculating the flare gas exit velocity under §60.18(f)(4).

(i) Within 60 days after the date of completing each performance test (as defined in §60.8), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by §60.764(b) or (d) according to §60.767(i)(1).

[40 CFR 60.764(e)]

iii) Compliance Provisions

i. Collection System Compliance Determination

(a) Except as provided in §60.767(c)(2), the specified methods in paragraphs (a)(1) through (6) of this section must be used to determine whether the gas collection system is in compliance with §60.762(b)(2)(ii).

(i) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with §60.762(b)(2)(ii)(C)(1), LandGEM or either Equation 5 or Equation 6 of §60.765 must be used. The methane generation rate constant (k) and methane generation potential (Lo) kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site-specific values demonstrated to be appropriate and approved by Ecology. If k has been determined as specified in §60.764(a)(4), the value of k determined from the test must be used. A value of no more than 15 years must be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(a) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_o R\left(e^{-kc} - e^{-kt}\right)$$

Where:

Q_m = Maximum expected gas generation flow rate, cubic meters per year.

L_o = Methane generation potential, cubic meters per megagram solid waste.

R = Average annual acceptance rate, megagrams per year.

k = Methane generation rate constant, year−1.

t = Age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.

c = Time since closure, years (for an active landfill c = 0 and e−kc = 1).

(b) For sites with known year-to-year solid waste acceptance rate:

$$Q_m = \sum_{i=1}^{n} 2kL_oM_i\left(e^{-kt_i}\right)$$

Where:

Q_M = Maximum expected gas generation flow rate, cubic meters per year.

k = Methane generation rate constant, year−1.

L_o = Methane generation potential, cubic meters per megagram solid waste.

M_i = Mass of solid waste in the i^{th} section, megagrams.

t_i = Age of the i^{th} section, years.

(c) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, Equation 5 or Equation 6 in paragraphs (a)(1)(i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using Equation 5 or Equation 6 in paragraphs (a)(1)(i) or (ii) of this section or other methods must be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

(ii) For the purposes of determining sufficient density of gas collectors for compliance with §60.762(b)(2)(ii)(C)(2), the owner or operator must design a system of vertical wells,

horizontal collectors, or other collection devices, satisfactory to Ecology, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(iii) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.762(b)(2)(ii)(C)(3), the owner or operator must measure gauge pressure in the gas collection header applied to each individual well, monthly. If a positive pressure exists, action must be initiated to correct the exceedance within five calendar days, except for the three conditions allowed under §60.763(b). Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(a) If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after positive pressure was first measured. The owner or operator must keep records according to §60.768(e)(3).

(b) If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the positive pressure measurement. The owner or operator must submit the items listed in §60.767(g)(7) as part of the next annual report. The owner or operator must keep records according to §60.768(e)(4).

(c) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to Ecology, according to §60.767(g)(7) and §60.767(j). The owner or operator must keep records according to §60.768(e)(5).

(iv) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator must

monitor each well monthly for temperature as provided in §60.763(c). If a well exceeds the operating parameter for temperature, action must be initiated to correct the exceedance within five calendar days. Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(a) If a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit) cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit), the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after a landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit) was first measured. The owner or operator must keep records according to §60.768(e)(3).

(b) If corrective actions cannot be fully implemented within 60 days following the positive pressure or elevated temperature measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit) or positive pressure. The owner or operator must submit the items listed in §60.767(g)(7) as part of the next annual report. The owner or operator must keep records according to §60.768(e)(4).

(c) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to Ecology, according to §60.767(g)(7) and §60.767(j). The owner or operator must keep records according to §60.768(e)(5).

(v) An owner or operator seeking to demonstrate compliance with §60.762(b)(2)(ii)(C)(4) through the use of a collection system not conforming to the specifications provided in §60.769 must provide information satisfactory to Ecology as

specified in §60.767(c)(3) demonstrating that off-site migration is being controlled.

[40 CFR 60.765(a)]

ii. Collection System Compliance Timing

(a) For purposes of compliance with §60.763(a), each owner or operator of a controlled landfill must place each well or design component as specified in the approved design plan as provided in §60.767(c). Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

(i) Five years or more if active; or

(ii) Two years or more if closed or at final grade.

[40 CFR 60.765(b)]

iii. Methane Concentration Compliance Determination

(a) The following procedures must be used for compliance with the surface methane operational standard as provided in §60.763(d) (Requirement EU-2.7 and EU-2.26).

(i) After installation and startup of the gas collection system, the permittee must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of §60.765, according to the following schedule:

First Quarter	December 15 to January 15
Second Quarter	March 15 to April 15
Third Quarter	June 15 to July 15
Fourth Quarter	September 15 to October 15

(ii) The background concentration must be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(iii) Surface emission monitoring must be performed in accordance with section 8.3.1 of Method 21 of 40 CFR 60, except that the probe inlet must be placed within five to 10 centimeters of the

ground. Monitoring must be performed during typical meteorological conditions.

(iv) Any reading of 500 parts per million or more above background at any location must be recorded as a monitored exceedance and the actions specified in paragraphs (c)(4)(i) through (v) of this section must be taken. As long as the specified actions are taken, exceedance is not a violation of the operational requirements of §60.763(d).

(a) The location of each monitored exceedance must be marked, and the location and concentration recorded.

(b) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 calendar days of detecting the exceedance.

(c) If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken, and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph (c)(4)(v) of this section must be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) of this section has been taken.

(d) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4)(ii) or (iii) of this section must be re-monitored one month from the initial exceedance. If the one month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one month re-monitoring shows an exceedance, the actions specified in paragraph (c)(4)(iii) or (v) of this section must be taken.

(e) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device must be installed within 120 calendar days of the initial

exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to Ecology for approval.

(v) The owner or operator must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[40 CFR 60.765(c)]

iv. Monitoring System Compliance Determination

(a) Each owner or operator seeking to comply with the provisions in paragraph (c) of this section or §60.764(a)(6) must comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(i) The portable analyzer must meet the instrument specifications provided in section 6 of Method 21 of appendix A of this part, except that "methane" replaces all references to "VOC".

(ii) The calibration gas must be methane, diluted to a nominal concentration of 500 parts per million in air.

(iii) To meet the performance evaluation requirements in section 8.1 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 8.1 of Method 21 of appendix A of this part must be used.

(iv) The calibration procedures provided in sections 8 and 10 of Method 21 of appendix A of this part must be followed immediately before commencing a surface monitoring survey.

[40 CFR 60.765(d)]

v. Compliance Required at all Times

(a) The provisions of Subpart XXX of 40 CFR 60 apply at all times, including periods of startup, shutdown or malfunction. During periods of startup, shutdown, and malfunction, you must comply with the work practice specified in §60.763(e) in lieu of the compliance provisions in §60.765.

[40 CFR 60.765(e)]

iv) Operational Standards for Collection and Control Systems

i. LFG Collection System Monitoring

(a) For each active gas collection system, the permittee must install a sampling port and a thermometer, other temperature measuring

device, or an access port for temperature measurements at each wellhead and:

(i) Measure the gauge pressure in the gas collection header monthly as provided in §60.765(a)(3); and

(ii) Monitor nitrogen or oxygen concentration in the landfill gas monthly as follows:

(a) The nitrogen level must be determined using Method 3C.

(b) Determine the oxygen level by an oxygen meter using Method 3A, 3C, or ASTM D6522-11 (if sample location is prior to combustion) except that:

(i) The span must be set between 10 and 12 percent oxygen;

(ii) A data recorder is not required;

(iii) Only two calibration gases are required, a zero and span;

(iv) A calibration error check is not required;

(v) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(c) A portable gas composition analyzer may be used to monitor the oxygen levels provided:

(i) The analyzer is calibrated; and

(ii) The analyzer meets all quality assurance and quality control requirements for Method 3A or ASTM D6522-11.

(iii) Monitor temperature of the landfill gas on a monthly basis as provided in 60.765(a)(5). The temperature measuring device must be calibrated annually using the procedure in 40 CFR part 60, appendix A-1, Method 2, section 10.3 such that a minimum of two temperature points, bracket within 10 percent of all landfill absolute temperature measurements or two fixed points of ice bath and boiling water, corrected for barometric pressure, are used.

[40 CFR 60.766(a)]

ii. Enclosed Flare Monitoring

(a) For each enclosed combustor, the permittee must calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

(i) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.

(ii) A device that records flow to the control device and bypass of the control device (if applicable). The owner or operator must:

(a) Install, calibrate, and maintain a gas flow rate measuring device that must record the flow to the control device at least every 15 minutes; and

(b) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[40 CFR 60.766(b)]

iii. Non-enclosed (Open) Flare Monitoring

(a) If the permittee is seeking to comply with §60.762(b)(2)(iii) using a non-enclosed flare, the permittee must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(i) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

(ii) A device that records flow to the flare and bypass of the flare (if applicable). The permittee must:

(a) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes; and

(b) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[40 CFR 60.766(c); Cond. 7(a), AO 19AQ-E051 9/19/2019]

iv. Surface Methane Monitoring Intervals

(a) The permittee must monitor surface concentrations of methane according to the procedures in §60.765(c) and the instrument specifications in §60.765(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring. [40 CFR 60.766(f)]

v. Gas Treatment System Monitoring

(a) If the permittee is seeking to demonstrate compliance with §60.762(b)(2)(iii) by using a landfill gas treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process, the permittee must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in §60.768(b)(5)(ii) and must calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). The permittee must:

(i) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[40 CFR 60.766(g)]

vi. Control Equipment Monitoring

(a) The monitoring requirements of paragraphs (b), (c) (d) and (g) of §60.766 apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring

system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee is required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. [40 CFR 60.766(h)]

v) Reporting Requirements

All reports required under this section shall be submitted to Ecology at:

Washington Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, Washington 99205-1295

i. Design Capacity Report

(a) Design capacity report. Each owner or operator subject to the requirements of this subpart must submit an initial design capacity report to Ecology.

(i) Submission. The initial design capacity report fulfills the requirements of the notification of the date construction is commenced as required by §60.7(a)(1) and must be submitted no later than:

(a) November 28, 2016, for landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016; or

(b) 90 days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016.

(ii) Initial design capacity report. The initial design capacity report must contain the following information:

(a) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the state, local, or tribal agency responsible for regulating the landfill.

(b) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the state, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be

submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity must be calculated using good engineering practices. The calculations must be provided, along with the relevant parameters as part of the report. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site-specific density, which must be recalculated annually. Any density conversions must be documented and submitted with the design capacity report. The state, tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

(iii) Amended design capacity report. An amended design capacity report must be submitted to Ecology providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to meet or exceed 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in §60.768(f).

Note: This requirement has been completed.

[40 CFR 60.767(a)]

(b) NMOC Emission Rate Report

(i) NMOC emission rate report. Each owner or operator subject to the requirements of this subpart must submit an NMOC emission rate report following the procedure specified in paragraph (i)(2) of §60.767 to Ecology initially and annually thereafter, except as provided for in paragraph (b)(1)(ii) of §60.767. Ecology may request such additional information as may be necessary to verify the reported NMOC emission rate.

(a) The NMOC emission rate report must contain an annual or five year estimate of the NMOC emission rate

calculated using the formula and procedures provided in §60.764(a) or (b), as applicable.

(i) The initial NMOC emission rate report may be combined with the initial design capacity report required in paragraph (a) of §60.767 and must be submitted no later than indicated in paragraphs (b)(1)(i)(A) and (B) of §60.767. Subsequent NMOC emission rate reports must be submitted annually thereafter, except as provided for in paragraph (b)(1)(ii) of §60.767.

- November 28, 2016, for landfills that commenced construction, modification, or reconstruction after July 17, 2014, but before August 29, 2016, or
- Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016.

(b) If the estimated NMOC emission rate as reported in the annual report to Ecology is less than 34 megagrams per year in each of the next five consecutive years, the owner or operator may elect to submit, following the procedure specified in paragraph (i)(2) of §60.767, an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate must include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based must be provided to Ecology. This estimate must be revised at least once every five years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five-year estimate, a revised five-year estimate must be submitted to Ecology. The revised estimate must cover the five-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(ii) The NMOC emission rate report must include all the data, calculations, sample reports and measurements used to estimate the annual or five-year emissions.

(iii) Each owner or operator subject to the requirements of this subpart is exempted from the requirements to submit an NMOC emission rate report, after installing a collection and control system that complies with §60.762(b)(2), during such time as the collection and control system is in operation and in compliance with §§60.763 and 60.765.

[40 CFR 60.767(b)]

(c) Collection and Control System Design Plan

(i) Collection and control system design plan. Each owner or operator subject to the provisions of §60.762(b)(2) must submit a collection and control system design plan to Ecology for approval according to the schedule in paragraph (c)(4) of §60.767. The collection and control system design plan must be prepared and approved by a professional engineer and must meet the following requirements:

(a) The collection and control system as described in the design plan must meet the design requirements in §60.762(b)(2).

(b) The collection and control system design plan must include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§60.763 through 60.768 proposed by the owner or operator.

(c) The collection and control system design plan must either conform with specifications for active collection systems in §60.769 or include a demonstration to Ecology's satisfaction of the sufficiency of the alternative provisions to §60.769.

(d) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters must submit a collection and control system design plan to Ecology for approval within 1 year of the first NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year.

(e) The landfill owner or operator must notify Ecology that the design plan is completed and submit a copy of the plan's signature page. Ecology has 90 days to decide whether the design plan should be submitted for review. If Ecology chooses to review the plan, the approval process continues as described in paragraph (c)(6) of §60.767. However, if Ecology indicates that submission is not required or does not respond within 90 days, the landfill owner or operator can continue to implement the plan with the recognition that the owner or operator is proceeding at their own risk. In the event that the design plan is required to be modified to obtain approval, the owner or operator must take any steps necessary to conform any prior actions to the approved design plan and any failure to do so could result in an enforcement action.

(f) Upon receipt of an initial or revised design plan, Ecology must review the information submitted under paragraphs (c)(1) through (3) of §60.767 and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems. If Ecology does not approve or disapprove the design plan or does not request that additional information be submitted within 90 days of receipt, then the owner or operator may continue with implementation of the design plan, recognizing they would be proceeding at their own risk.

(g) If the owner or operator chooses to demonstrate compliance with the emission control requirements of this subpart using a treatment system as defined in this subpart, then the owner or operator must prepare a site-specific treatment system monitoring plan as specified in §60.768(b)(5).

Note: This requirement has been completed.

[40 CFR 60.767(c)]

(d) Revised Design Plan

(i) Revised design plan. The owner or operator who has already been required to submit a design plan under paragraph (c) of §60.767 must submit a revised design plan to Ecology for approval as follows:

(a) At least 90 days before expanding operations to an area not covered by the previously approved design plan.

(b) Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to Ecology according to paragraph (c) of §60.767.

[40 CFR 60.767(d)]

(e) Closure Report

(i) The permittee must submit a closure report to Ecology within 30 days of waste acceptance cessation. Ecology may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to Ecology, no additional wastes may be placed into the landfill without filing a notification of modification as described under §60.7(a)(4). [40 CFR 60.767(e)]

(f) Equipment Removal Report

(i) The permittee must submit an equipment removal report to Ecology 30 days prior to removal or cessation of operation of the control equipment.

(a) The equipment removal report must contain all of the following items:

(i) A copy of the closure report submitted in accordance with paragraph (e) of §60.767;

(ii) A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, unless the report of the results of the performance test has been submitted to the EPA via the EPA's Central Data Exchange (CDX), or information that demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the

pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 34 megagrams or greater of NMOC per year, unless the NMOC emission rate reports have been submitted to the EPA via the EPA's CDX. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports.

(b) Ecology may request such additional information as may be necessary to verify that all of the conditions for removal in §60.762(b)(2)(v) have been met.

[40 CFR 60.767(f)]

(g) Annual Report

(i) The permittee must submit to Ecology, following the procedure specified in paragraph (i)(2) of §60.767, annual reports of the recorded information in paragraphs (g)(1) through (7) of §60.767. The initial annual report must be submitted within 180 days of installation and startup of the collection and control system and must include the initial performance test report required under §60.8, as applicable, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX. In the initial annual report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX. For enclosed combustion devices and flares, reportable exceedances are defined under §60.768(c) (Section 3.4.6.3).

(a) Value and length of time for exceedance of applicable parameters monitored under §60.766(a), (b), (c), (d), and (g).

(b) Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under §60.766.

(c) Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.

(d) All periods when the collection system was not operating.

(e) The location of each exceedance of the 500 parts per million methane concentration as provided in §60.763(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. For location, you must determine the latitude and longitude coordinates using an instrument with an accuracy of at least four meters. The coordinates must be in decimal degrees with at least five decimal places.

(f) The date of installation and the location of each well or collection system expansion added pursuant to §60.765(a)(3), (a)(5), (b), and (c)(4).

(g) For any corrective action analysis for which corrective actions are required in §60.765(a)(3) or (5) and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or elevated temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

[40 CFR 60.767(g)]

(h) Initial Performance Test Report

This report has been submitted, so this requirement is fulfilled. [40 CFR 60.767(h)]

(i) Electronic Reporting

(i) The permittee must submit reports electronically according to paragraphs (i)(1) and (2) of §60.767.

(a) Within 60 days after the date of completing each performance test (as defined in §60.8), the permittee must submit the results of each performance test according to the following procedures:

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert____info.html) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's CDX (https://cdx.epa.gov/). Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternative file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site, once the XML schema is available. If you claim that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(b) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee must submit the results of the performance test to Ecology at the address listed in Section 3.3.

(ii) Each owner or operator required to submit reports following the procedure specified in this paragraph must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) The owner or operator must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI Web site (https://www3.epa.gov/ttn/chief/cedri/index.html). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the owner or operator must submit the report to Ecology at the address listed in Section 3.3. Once the form has been available in CEDRI for 90 calendar days, the owner or operator must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted.

[40 CFR 60.767(i)]

(j) Corrective Action and the Corresponding Timeline

(i) The permittee must submit according to paragraphs (j)(1) and (2) of §60.767.

(a) For corrective action that is required according to §60.765(a)(3)(iii) or (a)(5)(iii) and is expected to take longer than 120 days after the initial exceedance to complete, the permittee must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to Ecology as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit). Ecology must approve the plan for corrective action and the corresponding timeline.

(b) For corrective action that is required according to §60.765(a)(3)(iii) or (a)(5)(iii) and is not completed within 60 days after the initial exceedance, the permittee must submit a notification to Ecology as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance.

[40 CFR 60.767(j)]

(k) Liquids Addition Report

This report is not applicable because no leachate is recirculated, or liquid added. [40 CFR 60.767(k)]

(l) Tier 4 Notification

This report is not applicable. [40 CFR 60.767(l)]

(m) 24-hour High Temperature Report

This report is not applicable because Ephrata Landfill is not choosing to comply with §§63.1958, 63.1960, and 63.1961, as allowed at §60.762(b)(2)(iv). [40 CFR 60.767(l)]

vi) Recordkeeping Requirements

i. Design Capacity Records

(a) The permittee shall keep for at least five years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.762(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Offsite records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats are acceptable. [40 CFR 60.768(a)]

ii. Control Device Records

(a) The permittee must keep up-to-date, readily accessible records for the life of the control system equipment of the data listed in paragraphs (b)(1) through (5) of §60.768 as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of five years. Records of the control device vendor specifications must be maintained until removal.

(i) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.762(b)(2)(ii):

(a) The maximum expected gas generation flow rate as calculated in §60.765(a)(1).

(b) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in §60.769(a)(1).

(ii) Where the permittee seeks to demonstrate compliance with §60.762(b)(2)(iii) through use of an enclosed flare:

(a) The average temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

(b) The percent reduction of NMOC determined as specified in §60.762(b)(2)(iii)(B) achieved by the control device.

(iii) Not applicable.

(iv) Where the permittee seeks to demonstrate compliance with §60.762(b)(2)(iii)(A) through use of a non-enclosed flare, the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(v) Where the permittee seeks to demonstrate compliance with §60.762(b)(2)(iii) through use of a landfill gas treatment system:

(a) Bypass records. Records of the flow of landfill gas to, and bypass of, the treatment system.

(i) Site-specific treatment monitoring plan, to include:

(ii) Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, de-watering, and compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas.

(iii) Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas.

(iv) Documentation of the monitoring methods and ranges, along with justification for their use.

(v) Identify who is responsible (by job title) for data collection.

(vi) Processes and methods used to collect the necessary data.

(vii) Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems.

[40 CFR 60.768(b)]

iii. Control Equipment Operating Records

(a) The permittee must keep for five years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.766 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(i) The permittee, if seeking to comply with the provisions of this subpart by use of an enclosed combustor, all three hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test at which compliance with §60.762(b)(2)(iii) was determined.

(ii) The permittee must keep up-to-date, readily accessible continuous records of the indication of flow to the control system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under §60.766.

(iii) Not applicable

(iv) The permittee, if seeking to comply with the provisions of this subpart by use of a non-enclosed flare, must keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under §60.766(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(v) The permittee, if seeking to comply with the provisions of this subpart by using an active collection system designed in accordance with §60.762(b)(2)(ii) must keep records of periods when the collection system or control device is not operating.

[40 CFR 60.768(c)]

iv. Collection System Records

(a) The permittee must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(i) The permittee must keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.765(b).

(ii) The permittee must keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in §60.769(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.769(a)(3)(ii).

[40 CFR 60.768(d)]

v. Exceedances and Corrective Actions Records

(a) The permittee must keep for at least five years up-to-date, readily accessible records of the items in paragraphs (e)(1) through (5) of §60.768.

(i) All collection and control system exceedances of the operational standards in §60.763, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(ii) The permittee must also keep records of each wellhead temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit) or above, each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above five percent.

(iii) For any root cause analysis for which corrective actions are required in §60.765(a)(3)(i) or (a)(5)(i), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed.

(iv) For any root cause analysis for which corrective actions are required in §60.765(a)(3)(ii) or (a)(5)(ii), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for

implementation, including proposed commencement and completion dates.

(v) For any root cause analysis for which corrective actions are required in §60.765(a)(3)(iii) or (a)(5)(iii), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the regulatory agency.

[40 CFR 60.768(e)]

vi. Design Capacity Records

(a) Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", must keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

[40 CFR 60.768(f)]

vii) Specification for Active Collection Systems

i. The permittee seeking to comply with §60.762(b)(2)(i) must site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures:

ii. The collection devices within the interior must be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues must be addressed in the design: Depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, resistance to the refuse decomposition heat, and ability to isolate individual components or sections for repair or troubleshooting without shutting down entire collection system.

iii. The sufficient density of gas collection devices determined in paragraph (a)(1) of §60.769 must address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

iv. The placement of gas collection devices determined in paragraph (a)(1) of §60.769 must control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (ii) of §60.768.

(a) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under §60.768(d). The documentation must provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area and must be provided to Ecology upon request.

(b) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material must be documented and provided to Ecology upon request. A separate NMOC emissions estimate must be made for each section proposed for exclusion, and the sum of all such sections must be compared to the NMOC emissions estimate for the entire landfill.

(i) The NMOC emissions from each section proposed for exclusion must be computed using the following equation:

$$Q_i = 2kL_oM_i\left(e^{-kt_i}\right)(C_{NMOC})(3.6 \times 10^{-9})$$

Where:

Q_i = NMOC emission rate from the ith section, megagrams per year.

k = Methane generation rate constant, year−1.

L_O = Methane generation potential, cubic meters per megagram solid waste.

M_i = Mass of the degradable solid waste in the ith section, megagram.

t_i = Age of the solid waste in the ith section, years.

C_{NMOC} = Concentration of nonmethane organic compounds, parts per million by volume.

3.6×10^{-9} = Conversion factor.

(ii) If the permittee is proposing to exclude, or cease gas collection and control from, nonproductive physically separated (e.g., separately lined) closed areas that already have gas collection systems, NMOC emissions from each physically separated closed area must be computed using either Equation 3 in §60.764(b) or Equation 7 in paragraph (a)(3)(ii)(A) of §60.768.

(c) The values for k and CNMOC determined in field testing must be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, Lo and CNMOC provided in §60.764(a)(1). The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in paragraph (a)(3)(i) of §60.768.

viii) Each owner or operator seeking to comply with §60.762(b)(2)(ii)(A) construct the gas collection devices using the following equipment or procedures:

i. The landfill gas extraction components must be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: Convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system must extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated with regard to the need to prevent excessive air infiltration.

ii. Vertical wells must be placed so as not to endanger underlying liners and must address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors must be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices must be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

iii. Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly must include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices must be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

ix) Each owner or operator seeking to comply with §60.762(b)(2)(iii) must convey the landfill gas to a control system in compliance with §60.762(b)(2)(iii) through the collection header pipe(s). The gas mover equipment must be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

i. For existing collection systems, the flow data must be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (c)(2) of §60.769 must be used.

ii. For new collection systems, the maximum flow rate must be in accordance with §60.765(a)(1).

[40 CFR 60.769]

e) Notification and Recordkeeping

The permittee shall keep a record of the weight of solid waste accepted by the landfill per day and per calendar year [Cond. 2(b), AO 19AQ-E051 9/19/2019].

Records shall be kept of each instrument calibration and surface monitoring event to verify that each of the above related conditions were met [Cond. 7(d), AO 19AQ-E051 9/19/2019].

Within 30 days of conducting any surface testing or monitoring required under Requirement EU-2.2, the permittee shall submit a written report of the results to Ecology [Cond. 6(d), AO 19AQ-E051 9/19/2019].

Ecology shall be notified within three days of any surface monitoring reading over 1,250 parts per million methane [Cond. 7(e), AO 19AQ-E051 9/19/2019].

4. Inapplicable Requirements

The permittee did not request that any requirements be deemed inapplicable.

Appendix A: Federal and State Regulation Date Reference List

WAC	F	S	CFR	F	RCW	S
425	X	3/13/2000	52.33	7/1/2024	70A.15.1070	2024
441	X	3/12/2022	60.11	7/1/2024	70A.15.2210	2024
460	X	11/22/2019	60.12	7/1/2024	70A.15.2220	2024
400-035	X	9/16/2018	60.332	7/1/2024	70A.15.2230	2024
400-040	2/24/2020	9/16/2018	60.334	7/1/2024	70A.15.2270	2024
400-050	2/24/2020	1/19/2023	60.335	7/1/2024	70A.15.2500	2024
400-060	2/24/2020	11/25/2018	60.4	7/1/2024	70A.15.2530	2024
400-070	10/6/2016	1/19/2023	60.43	7/1/2024	70A.15.6410	2024
400-075	X	7/1/2016	60.46	7/1/2024	70A.15.6420	2024
400-105	2/24/2020	11/25/2018	60.48	7/1/2024		
400-107	6/2/1995	9/16/2018	60.49	7/1/2024		
400-110	9/29/2016	12/29/2012	60.7	7/1/2024		
400-113	4/29/2015	12/29/2012	60.8	7/1/2024		
400-114	X	12/29/2012	61, subpart M	7/1/2024		
400-171	2/24/2020	9/16/2018	63.6	7/1/2024		
400-200	10/3/2014	2/10/2005	63.7	7/1/2024		
400-205	6/2/1995	3/22/1991	63.8	7/1/2024		
400-560	4/29/2015	12/29/2012	63.9	7/1/2024		
400-720	10/6/2016	1/19/2023	63.10	7/1/2024		
400-820	11/7/2014	12/29/2012	63.455	7/1/2024		
401-200	1/2/2003	3/5/2016	63.7500	7/1/2024		
401-500	1/2/2003	10/17/2002	63.7510	7/1/2024		
401-510	1/2/2003	3/5/2016	63.7515	7/1/2024		
401-520	1/2/2003	11/4/1993	63.7520	7/1/2024		
401-530	1/2/2003	10/17/2002	63.7525	7/1/2024		
401-605	1/2/2003	11/4/1993	63.7540	7/1/2024		
401-610	1/2/2003	11/4/1993	63.7545	7/1/2024		
401-615	1/2/2003	10/17/2002	63.7550	7/1/2024		
401-620	1/2/2003	11/4/1993	64.3	7/1/2024		
401-625	1/2/2003	11/4/1993	64.4	7/1/2024		
401-630	1/2/2003	3/5/2016	64.6	7/1/2024		
401-640	1/2/2003	11/4/1993	64.7	7/1/2024		
401-645	1/2/2003	11/4/1993	64.8	7/1/2024		
401-650	1/2/2003	11/4/1993	64.9	7/1/2024		
401-705	1/2/2003	11/4/1993	68.36	7/1/2024		
401-710	1/2/2003	10/17/2002	70.6	7/1/2024		
401-720	1/2/2003	11/4/1993	82	7/1/2024		
401-722	1/2/2003	10/17/2002				
401-724	1/2/2003	3/5/2016				
401-730	1/2/2003	11/4/1993				
401-930	1/2/2003	1/30/1994				
455-100	X	11/25/2018				
455-120	X	12/31/2012				