

WAC 173-350-400 Limited purpose landfills. (1) Limited purpose landfills - Applicability.

(a) These standards apply to limited purpose landfills. Landfills in this category include facilities which may encompass considerable variations in waste types, site conditions, and operational controls. The primary characteristic of a limited purpose landfill is that it is not allowed to receive municipal solid waste.

(b) These standards do not apply to:

(i) Landfills regulated under chapter 173-351 WAC, Criteria for municipal solid waste landfills;

(ii) Landfills regulated under WAC 173-350-410 Inert waste landfills;

(iii) Landfills regulated under chapter 173-306 WAC, Special incinerator ash management standards;

(iv) Landfills regulated under chapter 173-303 WAC, Dangerous waste regulations; and

(v) Landfills regulated under Title 40 C.F.R. Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.

(2) **Limited purpose landfills - Permit exemptions.** There are no permit exemptions for limited purpose landfills.

(3) **Limited purpose landfills - Permit requirements - Location.** All limited purpose landfills must be located to meet the following requirements:

(a) No landfill may be located over a Holocene fault, in subsidence areas, or on or adjacent to an unstable slope or other geologic features which could compromise the structural integrity of the facility;

(b) No landfill's active area may be located closer than one thousand feet to an existing water supply well;

(c) No landfill's active area may be located in a channel migration zone or within two hundred feet, measured horizontally, of a stream, lake, pond, river, saltwater body, or in any wetland. All facilities must conform to location restrictions established in local shoreline management plans adopted pursuant to chapter 90.58 RCW, Shoreline Management Act of 1971;

(d) No landfill may be located within ten thousand feet of any airport runway currently used by turbojet aircraft or five thousand feet of any airport runway currently used by only piston-type aircraft unless the federal aviation administration grants a waiver. This requirement is only applicable where a landfill is used for disposing of wastes where a bird hazard to aircraft would be created; and

(e) All landfills must comply with the location standards specified in RCW 70.95.060.

(4) **Limited purpose landfills - Permit requirements - Design.** All landfills must be designed and constructed to meet the design standards of this subsection, the performance standards of WAC 173-350-040, and must be appropriate for and compatible with the waste, the site, and the operation.

(a) Landfill design must consider:

(i) Waste characterization;

(ii) Soil conditions;

(iii) Hydrogeologic conditions;

(iv) Hydraulic conditions;

(v) Contaminant fate and transport;

(vi) Topography;

(vii) Climate;

- (viii) Seismic conditions;
- (ix) The site capacity and each landfill unit;
- (x) Anticipated leachate characteristics and quantity;
- (xi) Operational controls; and
- (xii) Environmental monitoring systems.

(b) Landfill gas control. Limited purpose landfills must be designed to control methane and other explosive gases to ensure they do not exceed:

(i) Twenty-five percent of the lower explosive limit for the gases in facility structures (excluding the gas control or recovery system components);

(ii) The lower explosive limit for gases in soil or in ambient air at the property boundary or beyond; and

(iii) One hundred parts per million by volume of hydrocarbons (expressed as methane) in off-site structures.

(c) Liner system design.

(i) Liner system performance standard. Limited purpose landfills must be constructed in accordance with a design that:

(A) Will prevent the contamination of the hydrostratigraphic units identified in the hydrogeologic assessment of the facility at the point of compliance as specified during the permitting process; and

(B) Will meet the landfill gas control requirements of (b) of this subsection.

(ii) Liner system design and construction. The owner or operator of a limited purpose landfill must select one of the three options for liner system design and construction described in (c)(ii)(A), (B), and (C) of this subsection. The options described in (B) and (C) of this subsection require that the owner or operator must demonstrate to the satisfaction of the jurisdictional health department during the permitting process that the proposed liner design will comply with the liner performance standard of (c)(i) of this subsection and the specific requirements of this item.

(A) Presumptive liner design. Limited purpose landfills designed and constructed with the following composite liner are presumed to meet the performance standard of (c)(i) of this subsection. The presumptive liner design consists of the following two components:

(I) A lower component consisting of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec; and

(II) An upper component consisting of a high-density polyethylene (HDPE) geomembrane with a minimum of 60-mil thickness. The geomembrane must be installed in direct and uniform contact with the lower component.

(B) Facility-specific liner design. Limited purpose landfills may be designed and constructed with an engineered liner system that the owner or operator demonstrates will meet the performance standard of (c)(i) of this subsection. The final liner system must be appropriate for and compatible with the characteristics of the site, the wastes that are specified in a solid waste permit as allowed for disposal in the landfill, and the operation of the facility.

(C) Operation without an engineered liner. Limited purpose landfills may be designed and constructed without an engineered liner system, if the owner or operator demonstrates to the satisfaction of the jurisdictional health department during the permitting process that:

(I) The contaminant levels in the waste and leachate are unlikely to pose an adverse impact to the environment; and

(II) The ability of natural soils to provide a barrier or reduce the concentration of contaminants provides sufficient protection to meet the performance standards of WAC 173-350-040; and

(III) The landfill will meet the landfill gas control requirements of (b) of this subsection.

(iii) Liner separation from groundwater. No landfill liner system may be constructed with the bottom of the lowest component less than ten feet above the seasonal high level of groundwater, unless a hydraulic gradient control system has been installed which prevents groundwater from contacting the liner. For the purpose of this section, groundwater includes any water-bearing unit which is horizontally and vertically extensive, hydraulically recharged, and volumetrically significant as to harm or endanger the integrity of the liner at any time.

(iv) Hydraulic gradient control system performance standard. When incorporated into a landfill design, a demonstration must be made during the permit process that the hydraulic gradient control system can control groundwater fluctuations and maintain separation between the controlled seasonal high level of groundwater and the bottom of the liner system. The system must not negatively impact waters of the state or impede the ability to collect representative samples of the groundwater at the point of compliance. The demonstration must include:

(A) A discussion in the geologic and hydrogeologic site characterization showing the effects from subsoil settlement, changes in surrounding land uses, climatic trends or other impacts affecting groundwater levels during the active life and post-closure period of the landfill;

(B) A discussion of the gradient control system's potential impacts on quality and quantity of groundwater or surface water. This discussion must include potential impacts to water users and instream flow and levels of surface waters in direct hydrologic contact with the hydraulic gradient control system. Any available ground or surface water quality data for hydrostratigraphic units, springs, or surface waters in direct hydrologic contact with the hydraulic gradient control system must be included;

(C) A discussion of how the hydraulic gradient control system will protect or impact the structural integrity and performance of the liner system; and

(D) Design specifications for the proposed ground and surface water monitoring systems.

(d) Leachate collection and control system design. Except when a landfill is designed and constructed without an engineered liner under (c)(ii)(C) of this subsection, limited purpose landfills must be constructed in accordance with a design that:

(i) Provides for collection and removal of leachate generated in the landfill;

(ii) Is capable of maintaining a leachate head of less than one foot over the liner system and less than two feet in leachate sump areas;

(iii) Includes a monitoring system capable of collecting representative samples of leachate generated in the landfill; and

(iv) Provides for leachate storage, treatment, or pretreatment to meet the requirements of WAC 173-350-330 Surface impoundments and tanks, chapter 90.48 RCW, Water pollution control, and the Federal

Clean Water Act, as appropriate when leachate is to be discharged from the facility.

(e) Run-on/runoff control system design. Limited purpose landfills must be constructed in accordance with a design that:

(i) Will prevent flow onto the active portion of the landfill during the peak discharge from a twenty-five-year storm;

(ii) Will prevent unpermitted discharges from the active portion of the landfill resulting from a twenty-five-year storm; and

(iii) When located in a one hundred-year flood plain, the entrance and exit roads and landfill practices do not restrict the flow of the base flood, reduce the temporary water storage capacity of the flood plain, or result in washout of solid waste.

(f) Final closure system design.

(i) Final closure performance standard. Limited purpose landfills must be closed in accordance with a design that:

(A) Prevents exposure of waste;

(B) Minimizes infiltration (at a minimum, the design will prevent the generation of significant quantities of leachate to eliminate the need for leachate removal by the end of the post-closure period);

(C) Prevents erosion from wind and water;

(D) Is capable of sustaining native vegetation;

(E) Addresses anticipated settlement, with a goal of achieving no less than two to five percent slope after settlement;

(F) Provides sufficient stability and mechanical strength and addresses potential freeze-thaw and desiccation;

(G) Provides for the management of run-on and runoff, preventing erosion or otherwise damaging the closure cover;

(H) Minimizes the need for post-closure maintenance;

(I) Provides for collection and removal of methane and other gases generated in the landfill to meet the requirements of (b) of this subsection. Landfill gas must be purified for sale, used for its energy value, or flared when the quantity and quality of landfill gases will support combustion. Landfill gases may be vented when they will not support combustion. The collection and removal system must include a monitoring system capable of collecting representative samples of gases generated in the landfill; and

(J) Meets the requirements of regulations, permits and policies administered by the jurisdictional air pollution control authority or the department under chapter 70.94 RCW, Washington Clean Air Act and Section 110 of the Federal Clean Air Act.

(ii) Final cover design and construction. The owner or operator of a limited purpose landfill must select one of the two options for final cover system design and construction described in (e)(ii)(A) and (B) of this subsection. The option described in (e)(ii)(B) of this subsection requires that the owner or operator must demonstrate to the satisfaction of the jurisdictional health department during the permitting process that the proposed final cover design will comply with the final cover performance standards of (f)(i) of this subsection and the specific requirements of this item.

(A) Presumptive final closure cover design. Limited purpose landfills designed and constructed with the following final closure cover are presumed to meet the performance standards in (f)(i)(A) through (D) of this subsection. The presumptive final closure cover consists of the following components:

(I) An antierosion layer consisting of a minimum of two feet of earthen material of which at least twelve inches of the uppermost lay-

er is capable of sustaining native vegetation, seeded with grass or other shallow rooted vegetation; and

(II) A geomembrane with a minimum of 30-mil thickness, or a greater thickness that is commensurate with the ability to join the geomembrane material and site characteristics such as slope, overlaying a competent foundation.

(B) Facility-specific final cover. Limited purpose landfills may be designed and constructed with an engineered final cover system that the owner or operator demonstrates will meet the performance standards of (f)(i) of this subsection. The final cover system must be appropriate for and compatible with: The characteristics of the site, the wastes that are specified in a solid waste permit as allowed for disposal in the landfill, and the operation of the facility.

(g) Water balance and groundwater contaminant fate and transport modeling. Any modeling performed for evaluating a landfill design must meet the following performance standards:

(i) All water balance analysis must be performed using:

(A) The Hydrologic Evaluation of Landfill Performance (HELP) Model; or

(B) Alternate methods approved by the jurisdictional health department. Alternate methods must have supporting documentation establishing its ability to accurately represent the water balance within the landfill unit.

(ii) Any groundwater and contaminant fate and transport modeling must be conducted by a licensed professional in accordance with the requirements of chapter 18.220 RCW, Geologists, and meet the following performance standards:

(A) The model must have supporting documentation that establishes the ability of those methods to represent groundwater flow and contaminant transport under the conditions at the site;

(B) The model must be calibrated against site-specific field data;

(C) A sensitivity analysis must be conducted to measure the model's response to changes in the values assigned to major parameters, specific tolerances, and numerically assigned space and time discretizations;

(D) The value of the model's parameters requiring site-specific data must be based upon actual field or laboratory measurements; and

(E) The values of the model's parameters that do not require site-specific data must be supported by laboratory test results or equivalent methods documenting the validity of the chosen parameter values.

(h) Seismic impact zones. Limited purpose landfills located in seismic impact zones must be designed and constructed so that all containment structures, including liners, leachate collection systems, surface water control systems, gas management, and closure cover systems are able to resist the maximum horizontal acceleration in earth materials for the site.

(i) The owner or operator of limited purpose landfills located in an unstable area must demonstrate that engineering measures have been incorporated into the landfill's design to ensure that the integrity of the structural components of the landfill will not be disrupted. The owner or operator must place the demonstration in the application for a permit. The owner or operator must consider the following factors, at a minimum, when determining whether an area is unstable:

(i) On-site or local soil conditions that may result in significant differential settling, surface rupture, or liquefaction;

(ii) On-site or local geologic or geomorphologic features indicating differential settling, surface rupture, or liquefaction; and
(iii) On-site or local human-made features or events (both surface and subsurface) indicating differential settling, surface rupture, or liquefaction.

(j) Setback requirements. Limited purpose landfills must be designed to provide a setback of at least one hundred feet between the active area and the property boundary. The setback must be increased if necessary to:

(i) Control nuisance odors, dust, and litter;
(ii) Provide a space for the placement of monitoring wells, gas probes, run-on/runoff controls, and other design elements; or
(iii) Provide sufficient area to allow proper operation of the landfill and access to environmental monitoring systems and facility structures.

(k) Access control and traffic requirements. All limited purpose landfills must:

(i) Provide controls to limit public access and prevent unauthorized vehicular traffic, illegal dumping of wastes, and keep animals out, by use of artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment. A lockable gate is required at each entry to the landfill;

(ii) Provide approach and exit roads of all-weather construction, with traffic separation and traffic control on-site, and at the site entrance; and

(iii) Provide a sign at the entrance that identifies the facility and provides emergency contact information.

(5) Limited purpose landfills - Permit requirements - Documentation.

(a) The owner or operator must submit construction documents for, at a minimum, any proposed addition or modification of elements of the landfill described in subsection (4) of this section to the jurisdictional health department for review and approval. The construction documents for proposed construction of engineered features must be prepared by a professional engineer registered in the state of Washington, and must include:

(i) An engineering report that presents the design basis and calculations for the engineered features of the facility including, but not limited to: Liners, final closure covers, impoundments, stormwater management features, leachate management features, and aeration and emission control features as required by the permitting air authority where applicable. The engineering report must demonstrate that the proposed design will meet the performance standards of this chapter;

(ii) Scale drawings of the facility including the location and size of waste storage and disposal areas, fixed equipment, buildings, stormwater management features where applicable, access roads, traffic patterns, and other constructed areas and buildings integral to facility operation;

(iii) Design specifications for the engineered features of the facility including, but not limited to, liners, final closure covers, stormwater management features, leachate management features, and aeration and emission management features as required by a permitting air authority where applicable; and

(iv) A construction quality assurance plan that describes monitoring, testing, and documentation procedures that will be performed during construction of the facility to ensure the facility is constructed in accordance with the approved design.

(b) The owner or operator of a limited purpose landfill must provide copies of the construction record drawings for engineered features at the facility and a report documenting facility construction, including the results of observations and testing carried out as part of the construction quality assurance plan, to the jurisdictional health department and the department. The owner or operator must not commence operation in a newly constructed portion of the facility until the jurisdictional health department has determined that the construction was completed in accordance with the approved engineering report/plans and specifications and has approved the construction documentation in writing.

(6) **Limited purpose landfills - Permit requirements - Operating.**

The owner or operator of a limited purpose landfill must:

(a) Operate the facility in compliance with the performance standards of WAC 173-350-040 and this subsection. In addition, the owner or operator must develop, keep, and follow a plan of operation approved as part of the permitting process. The plan must describe the facility's operation and convey to site operating personnel the concept of operation intended by the designer. The plan of operation must be available for inspection at the request of the jurisdictional health department. If necessary, the plan may be modified with the approval, or at the direction, of the jurisdictional health department. Each plan of operation must include the following:

(i) A description of the types of solid waste to be handled at the facility;

(ii) A description of the criteria and procedures used to ensure that dangerous waste and other unacceptable waste, including liquid waste, are not accepted at the facility;

(iii) A description of how solid wastes are to be handled on-site, including identification of unloading and staging area, transportation practices, and housekeeping activities;

(iv) A description of how the owner or operator will ensure the facility is operated to:

(A) Protect containment and monitoring structures such as liners, leachate collection systems, surface water control systems, gas management, cover systems, and monitoring wells;

(B) Control litter, dust, and nuisance odors;

(C) Control rodents, insects, and other vectors;

(D) Provide attendant(s) on-site during hours of operation; and

(E) Prevent scavenging.

(v) If the landfill's capacity is greater than fifty thousand cubic yards per year, acknowledgment that at least two landfill personnel will be on-site with one person at the active face when the site is open to the public;

(vi) A description of how waste will be landfilled, including:

(A) How solid waste will be compacted before succeeding layers are added, except that the first lift over a liner may be left uncompacted to act as a cushion for subsequent lifts;

(B) How cover of disposed waste will be managed. Putrescible waste must be covered at the end of each operating day, or at more frequent intervals if necessary. The jurisdictional health department may grant a temporary waiver, not to exceed three months, from this cover requirement if the owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting these requirements impractical. Materials used for cover must be:

(I) At least six inches of earthen material, such as soils; or

(II) Alternative materials or an alternative thickness other than at least six inches of earthen material as approved by the jurisdictional health department when the owner or operator demonstrates that the alternative material or thickness will control vectors, fires, nuisance odors, blowing litter, scavenging, provide adequate access for heavy vehicles, and will not adversely affect gas or leachate composition and controls.

(vii) A description of how any explosive gases generated at the facility will be monitored and controlled, and how the owner or operator will respond to the detection of explosive gases in a manner that ensures protections of human health. This element of the plan must include, at a minimum:

(A) Controls to ensure that explosive gases generated by the facility do not exceed the criteria of subsection (4)(b) of this section;

(B) A routine explosive gas-monitoring program to ensure that all standards are met. The minimum frequency for monitoring is quarterly. The type and frequency of monitoring must be determined based on the following factors:

(I) Soil conditions;

(II) The hydrogeologic conditions surrounding the facility;

(III) The hydraulic conditions surrounding the facility; and

(IV) The location of facility structures and property boundaries;

(C) If explosive gas levels exceed the limits identified in subsection (4)(b) of this section, take all necessary steps to ensure protection of human health including:

(I) Notifying the jurisdictional health department;

(II) Notifying the local fire authority;

(III) Monitoring off-site structures;

(IV) Monitoring explosive gas levels daily, unless otherwise authorized by the jurisdictional health department;

(V) Evacuating buildings affected by landfill gas until determined to be safe for occupancy;

(VI) Within seven calendar days of the explosive gas levels detection, placing in the operating record the explosive gas levels detected and a description of the steps taken to protect human health and providing written notification to the jurisdictional health department;

(VII) Within sixty days of the explosive gas levels detection, implementing a remediation plan for the explosive gas releases, describing the nature and extent of the problem and the remedy. This plan must be sent to the jurisdictional health department for approval as an amendment to the plan of operation. A copy of the remediation plan shall be placed in the operating record; and

(VIII) When constructing and decommissioning gas monitoring and extraction wells, do so in a manner that protects groundwater and meets the requirements of chapter 173-160 WAC, Minimum standards for construction and maintenance of wells.

(viii) A description of how equipment, structures and other systems, including leachate collection, gas collection, run-on/runoff controls, and hydraulic gradient control systems, are to be inspected and maintained, including the frequency of inspection and inspection logs. The inspections must be at least weekly, unless an alternate schedule is approved by the jurisdictional health department as part of the permitting process;

(ix) A description of how operators will maintain operating records on the amounts (weight or volume) and types of waste received

and removed from the facility, and the number of vehicles delivering waste to the facility, including the form or computer printout used to record this information. Facility annual reports must be maintained in the operating record. Facility inspection reports must be maintained in the operating record, including at least the date of inspection, the name and signature of the inspector, a notation of observations made, and the date and nature of any needed repairs or remedial action. Significant deviations from the plan of operation must be noted in the operating record. Records must be kept for a minimum of five years and must be available upon request by the jurisdictional health department;

(x) A description of safety planning and emergency activities, including:

(A) On-site fire protection, as determined by the local and state fire control jurisdiction. Landfills disposing of wastes that can support combustion must have a method to control subsurface fires;

(B) Communications sufficient to handle emergencies will be provided between employees working at the landfill and management offices, on-site and off-site;

(C) Response procedures in the event of fire (including subsurface fires), a description of fire protection equipment available on-site and actions to take if there is a fire or explosion; and

(D) Response procedures in the event leachate or gas leaks are detected, or other releases occur.

(xi) Other details to demonstrate that the landfill will be operated in accordance with this subsection and as required by the jurisdictional health department.

(b) Prepare and submit a monitoring plan to the jurisdictional health department describing all gas, leachate, surface water, and groundwater monitoring to be conducted in order to meet the requirements of subsections (4) and (5) of this section, as well as WAC 173-350-500 for groundwater. This plan must be approved by the jurisdictional health department before being implemented. The jurisdictional health department may specify a periodic review schedule for the plan. This monitoring plan must:

(i) Provide appropriate, consistent sampling and analysis procedures designed to produce representative results. As appropriate, the plan must include procedures for:

(A) Sample collection and handling;

(B) Sample preservation and shipment;

(C) Analytical procedures;

(D) Chain-of-custody control;

(E) Quality assurance and quality control; and

(F) Decontamination of equipment.

(ii) The sampling and analytical methods must provide sufficient sensitivity, precision, selectivity and limited bias so that changes in conditions can be detected and quantified. All laboratory analyzed samples must be sent to an accredited laboratory for analyses according to chapter 173-50 WAC, Accreditation of environmental laboratories.

(c) Prepare and submit a landfill annual status report and an annual monitoring report to the jurisdictional health department and the department by April 1st of each year on forms provided by the department. These annual reports must cover landfill activities during the previous calendar year and must include the following information:

(i) Name and address of the facility;

(ii) Calendar year covered by the report;

(iii) Annual quantities and types of waste accepted in tons or cubic yards with an estimate of density in pounds per cubic yard;

(iv) Applicable financial assurance reviews and audit findings in accordance with WAC 173-350-600; and

(v) Any additional information required by the jurisdictional health department as a condition of the permit.

(7) **Limited purpose landfills - Permit requirements - Groundwater monitoring.** Limited purpose landfills are subject to the groundwater monitoring requirements of WAC 173-350-500.

(8) **Limited purpose landfills - Permit requirements - Closure.** The following requirements apply to facilities with limited purpose landfills:

(a) The owner or operator must develop, keep, and follow a closure plan approved by the jurisdictional health department as part of the permitting process. At a minimum, the closure plan must include the following information:

(i) A description of the final closure cover, designed in accordance with subsection (4)(e) of this section, the methods and procedures to be used to install the closure cover, sources of borrow materials for the closure cover, and a schedule or description of the time required for completing closure activities;

(ii) Projected time intervals at which sequential partial closure and final closure are to be implemented;

(iii) A description of the activities and procedures that will be used to ensure compliance with (b) through (f) of this subsection; and

(iv) Identify closure cost estimated and projected fund withdrawal intervals for the associated closure costs, from the approved financial assurance instrument.

(b) When the facility is ending active disposal operations the owner or operator must notify the jurisdictional health department, and where applicable, the financial assurance instrument provider, one hundred eighty days in advance of closure of the facility, or any portion thereof. The facility, or any portion thereof, must close in a manner that:

(i) Minimizes the need for further maintenance;

(ii) Controls, minimizes, or eliminates threats to human health and the environment from post-closure escape of solid waste constituents, leachate, landfill gases, contaminated runoff, or waste decomposition products to the ground, groundwater, surface water, and the atmosphere; and

(iii) Prepares the facility, or any portion thereof, for the post-closure period.

(c) The owner or operator must commence implementation of the closure plan in part or whole within thirty days after receipt of the final volume of waste and/or attaining the final landfill elevation at part of or at the entire landfill as identified in the approved facility closure plan unless otherwise specified in the closure plan;

(d) When landfill closure is completed in part or whole, the owner or operator must submit to the jurisdictional health department a certification by a professional engineer registered in the state of Washington, that the landfill, or a portion thereof, has been closed in accordance with the approved closure plan;

(e) Environmental covenant. Following closure of a limited purpose landfill, the owner operator must file an environmental covenant conforming to the procedures and requirements of chapter 64.70 RCW, Uniform Environmental Covenants Act. Unless waived in writing by the

department, the environmental covenant must be in a form approved by the department and include at a minimum the following provisions:

(i) State that the document is an environmental covenant executed pursuant to chapter 64.70 RCW, Uniform Environmental Covenants Act;

(ii) Contain a legally sufficient description of the real property subject to the covenant;

(iii) Designate the department, or other person approved by the department, as the holder of the covenant;

(iv) Be signed by the department, every holder, and, unless waived by the department, every owner of a fee simple interest in the real property subject to the covenant;

(v) Identify the name and location of the administrative record for the property subject to the environmental covenant;

(vi) Describe with specificity the activity or use limitations on the real property subject to the covenant. At a minimum, this must prohibit uses and activities that:

(A) Threaten the integrity of any cover, waste containment, stormwater control, gas leachate, public access control, or environmental monitoring systems;

(B) May interfere with the operation and maintenance, monitoring, or other measures necessary to assure the integrity of the landfill and continued protection of human health and the environment; and

(C) May result in the release of solid waste constituents or otherwise exacerbate exposures.

(vii) Grant the department and the jurisdictional health department the right to enter the property at reasonable times for the purpose of evaluating compliance with the environmental covenant, including the right to take samples.

(f) The jurisdictional health department will notify the owner or operator, the department, and the financial assurance instrument provider, of the date when the jurisdictional health department has verified that the facility, or a portion thereof, has been closed in accordance with the specifications of the approved closure plan and the closure requirements of this section, at which time the post-closure period commences.

(9) Limited purpose landfills - Permit requirements - Financial assurance.

(a) Financial assurance is required for all limited purpose landfills.

(b) Each owner or operator must establish a financial assurance mechanism in accordance with WAC 173-350-600 that will accumulate funds equal to the closure and post-closure cost estimates over the life of the landfill, or over the life of each landfill unit if closed discretely.

(c) No owner or operator may commence or continue disposal operations in any part of a facility subject to this section until a financial assurance instrument has been provided for closure and post-closure activities in accordance with WAC 173-350-600.

(10) Limited purpose landfills - Permit application contents. The owner or operator must obtain a solid waste permit from the jurisdictional health department. All applications for permits must be in accordance with the procedures established in WAC 173-350-710. In addition to the requirements of WAC 173-350-710 and 173-350-715, each application for a permit must contain:

(a) Demonstrations that the facility meets the location standards of subsection (3) of this section;

(b) Documentation that all owners of property located within one thousand feet of the boundary of the landfill as it is proposed to be located in the solid waste permit application have been notified that the proposed facility may impact their ability to construct water supply wells, in accordance with chapter 173-160 WAC, Minimum standards for construction and maintenance of wells;

(c) Engineering reports, plans, and specifications that address the standards of subsections (4) and (5) of this section;

(d) A construction quality assurance plan that addresses the requirements of subsection (5) of this section;

(e) A plan of operation meeting the requirements of subsection (6) of this section;

(f) Hydrogeologic reports and plans that address the requirements of subsection (7) of this section;

(g) A closure plan meeting the requirements of subsection (8) of this section;

(h) A post-closure plan meeting the requirements of subsection (11) of this section; and

(i) Documentation as needed to meet the financial assurance requirements of subsection (9) of this section.

(11) Limited purpose landfills - Post-closure care requirements.

(a) The owner or operator must conduct post-closure care for as long as necessary for the landfill to become functionally stable. A landfill is functionally stable when it does not present a threat to human health or the environment at the point of exposure for humans or environmental receptors. The point of exposure is identified as the closest location at which a receptor could be exposed to contaminants and receive a dose by a credible pathway from the landfill. Potential threats to human health or the environment are assessed by considering leachate quality and quantity, landfill gas production rate and composition, cover system integrity, and groundwater quality. The post-closure care period may be adjusted under (b) of this subsection. Post-closure care must consist of at least the following:

(i) Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, maintaining the vegetative cover (including cutting of vegetation when needed) or other events, and preventing run-on and runoff from eroding or otherwise damaging the final cover;

(ii) Monitoring the groundwater, surface water, leachate, landfill gas, and landfill settlement according to the monitoring plan described in subsection (6)(b) of this section, including any monitoring of remedial measures if applicable, and maintaining all monitoring systems;

(iii) Maintaining and operating the leachate collection system under subsection (4)(d) of this section, if applicable. The jurisdictional health department may recommend to the department, and the department may, under its authority in chapter 90.48 RCW, Water pollution control, allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;

(iv) Maintaining and operating the landfill gas collection and control system under subsections (4)(f)(i)(I) and (6)(a)(vii) of this section; and

(v) Maintaining, operating and monitoring hydraulic gradient control systems if applicable;

- (vi) Maintaining the facility and facility structures for their intended uses; and
 - (vii) Performing any other activities deemed appropriate by the jurisdictional health department.
- (b) The jurisdictional health department and owner or operator will consider at least the following factors when determining when a landfill unit is functionally stable or whether to decrease or increase the post-closure care period:
- (i) Leachate. The landfill's production and quality of leachate must have attained a state where maintenance and operation of the leachate collection system can be discontinued without posing a threat to human health or the environment;
 - (ii) Landfill gas. The landfill's production and composition of gas must have attained a state where maintenance and operation of the gas collection system can be discontinued while meeting the criteria in subsection (4)(b) of this section and not pose a threat to human health or the environment from methane or nonmethane compounds;
 - (iii) Settlement and cover integrity. The cover system must attain geotechnical stability for slope and settlement. Vegetation and other erosion controls must prevent exposing waste or otherwise threaten integrity of the cover system. The cover system must have attained a state where no additional care is required to ensure its integrity from settlement or erosion; and
 - (iv) Groundwater quality. Groundwater quality must remain in compliance with the performance standards of WAC 173-350-040 at the point of compliance.
- (c) The owner or operator must commence post-closure activities for the facility, or portion thereof, after completion of closure procedures and activities outlined in subsection (8) of this section;
- (d) The owner or operator must develop, keep, and follow a post-closure plan approved by the jurisdictional health department as a part of the permitting process. The post-closure plan must:
- (i) Address facility maintenance and monitoring activities for the duration of the post-closure care period; and
 - (ii) Project time intervals at which post-closure activities are to be implemented, and identify post-closure cost estimates and projected fund withdrawal intervals from the selected financial assurance instrument, where applicable, for the associated post-closure costs.
- (e) The owner or operator must complete post-closure activities for the facility, or portion thereof, in accordance with the approved post-closure plan and schedule, or the plan must be so amended with the approval of the jurisdictional health department;
- (f) When post-closure activities are complete, the owner or operator must submit a certification to the jurisdictional health department, signed by the owner or operator, and a professional engineer registered in the state of Washington stating why post-closure activities are no longer necessary;
- (g) If the jurisdictional health department finds that post-closure monitoring has established that the landfill is functionally stable, the health department may authorize the owner or operator to discontinue post-closure maintenance and monitoring activities; and
- (h) The jurisdictional health department must notify the owner or operator, the department, and the financial assurance instrument provider, of the date when the jurisdictional health department has verified that the facility has completed post-closure activities in accordance with the specifications of the approved post-closure plan.

[Statutory Authority: Chapter 70.95 RCW, and RCW 70.95.060, 70.95.215, 70.95.218, 70.95.260(6), 70.95.300, 70.95.305, 70.95.310, 70.95.440. WSR 18-17-008 (Order 13-08), § 173-350-400, filed 8/1/18, effective 9/1/18. Statutory Authority: Chapter 70.95 RCW. WSR 03-03-043 (Order 99-24), § 173-350-400, filed 1/10/03, effective 2/10/03.]