

**Chapter 173-304 WAC**  
**MINIMUM FUNCTIONAL STANDARDS FOR SOLID WASTE HANDLING**

Last Update: 10/4/88

**WAC**

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**WAC 173-304-010 Authority and purpose.** This regulation is promulgated under the authority of chapter 70.95 RCW to protect public health, to prevent land, air, and water pollution, and conserve the state's natural, economic, and energy resources by:

(1) Setting minimum functional performance standards for the proper handling of all solid waste materials originating from residences, commercial, agricultural and industrial operations and other sources;

(2) Identifying those functions necessary to assure effective solid waste handling programs at both the state and local level;

(3) Following the direction set by the legislature for the management of solid waste in order of descending priority as applicable:

- (a) Waste reduction;
- (b) Waste recycling;
- (c) Energy recovery or incineration;
- (d) Landfill.

(4) Describing the responsibility of persons, municipalities, regional agencies, state and local government under existing laws and regulations related to solid waste;

(5) Requiring use of the best available technology for siting, and all known available and reasonable methods for designing, constructing, operating and closing solid waste handling facilities; and

(6) Establishing these standards as minimum standards for solid waste handling to provide a statewide consistency and expectation as to the level at which solid waste is managed throughout the state. Local ordinances setting standards for solid waste handling shall not be less stringent than these minimum standards, and shall be adopted not later than one year after the effective date of this regulation. Local ordinances need not adopt WAC 173-304-011, County planning requirements, but shall otherwise comply with the requirements of WAC 173-304-011. Solid waste regulations or ordinances adopted by coun-

ties, cities, or jurisdictional boards of health shall be filed with the department ninety days following adoption.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-010, filed 10/28/85.]

**WAC 173-304-011 County planning requirements.** The concept of "solid waste management" includes in addition to proper storage, collection, and disposal of discards, other management functions or operational activities including waste reduction, source separation, waste recycling, transportation, processing, treatment, resource recovery, energy recovery, incineration, and landfilling. Under the State Solid Waste Management Act, chapter 70.95 RCW, primary responsibility for managing solid waste is assigned to local government (RCW 70.95.020). The state, however, is responsible for assuring that effective local programs are established throughout Washington state. Therefore, state and local solid waste planning for the aforementioned activities is an essential part of proper solid waste management.

(1) State responsibility. As described in RCW 70.95.260, the department shall coordinate the development of a state solid waste management plan in cooperation with local government, the department of community development, and other appropriate state and regional agencies. The state plan shall be reviewed at two-year intervals, revised as necessary, and extended so that the plan shall look to the future for twenty years as a guide in carrying out a coordinated state solid waste management program.

(2) Local government responsibility. The overall purpose of local comprehensive solid waste planning is to determine the nature and extent of the various solid waste categories and to establish management concepts for their handling, utilization, and disposal consistent with the priorities established in RCW 70.95.010 for waste reduction, waste recycling, energy recovery and incineration, and landfill. Each local plan shall be prepared in accordance with RCW 70.95.080, 70.95.090, 70.95.100, and 70.95.110. Additionally, the department has available "Guidelines for the development of local or regional solid waste management plans and plan revisions" to be followed by local government. RCW 70.95.165 also requires counties to establish a local solid waste advisory committee to assist in the development of programs and policies concerning solid waste handling and disposal and to review and comment upon proposed rules, policies, or ordinances prior to their adoption.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-011, filed 10/28/85.]

**WAC 173-304-012 Planning requirements for energy recovery or incineration facilities.** In order to implement the priorities and provide a basis for permit requirements established in chapter 70.95 RCW, each comprehensive solid waste management plan shall contain an analysis for waste reduction and recycling. The analysis will include a determination of levels of waste reduction and recycling which could occur for solid wastes that are proposed to be landfilled or incinerated. The analysis shall include: A description of markets for recycled material, a review of waste generation trends, a description of waste composition, a cost analysis of the impact of recycling or re-

duction programs on collection and disposal rates and a discussion and description of any additional programs needed to assist public and private sector recycling programs.

[Statutory Authority: Chapter 70.95 RCW. WSR 87-15-049 (Order 87-3), § 173-304-012, filed 7/14/87.]

**WAC 173-304-015 Applicability.** These regulations apply to solid wastes as that term is defined in WAC 173-304-100. These regulations shall not apply to the following solid wastes:

- (1) Overburden from mining operations intended for return to the mine;
- (2) Liquid wastes whose discharge or potential discharge is regulated under federal, state or local water pollution permits;
- (3) Dangerous wastes as defined by chapter 70.105 RCW and chapter 173-303 WAC;
- (4) Woodwaste used for ornamental, animal bedding, mulch and plant bedding, or roadbuilding purposes;
- (5) Agricultural wastes, limited to manures and crop residues, returned to the soils at agronomic rates;
- (6) Clean soils and clean dredge spoils as defined in WAC 173-304-100 or as otherwise regulated by section 404 of the Federal Clean Water Act (PL 95-217);
- (7) Septage taken to a sewage treatment plant permitted under chapter 90.48 RCW;
- (8) Radioactive wastes, defined by chapters 402-12 and 402-19 WAC; and
- (9) Wood debris resulting from the harvesting of timber and whose disposal is permitted under chapter 76.04 RCW, the State Forest Practices Act.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-015, filed 10/28/85.]

**WAC 173-304-100 Definitions.** When used in this regulation, the following terms have the meanings given below.

- (1) "Active area" means that portion of a facility where solid waste recycling, reuse, treatment, storage, or disposal operations are being, are proposed to be, or have been conducted. Buffer zones shall not be considered part of the active area of a facility.
- (2) "Agricultural wastes" means wastes on farms resulting from the production of agricultural products including but not limited to manures, and carcasses of dead animals weighing each or collectively in excess of fifteen pounds.
- (3) "Agronomic rates" means the rates of application of sludges, manures, or crop residues in accordance with rates specified by the appropriate fertilizer guide for the crop under cultivation.
- (4) "Air quality standard" means a standard set for maximum allowable contamination in ambient air as set forth in chapter 173-400 WAC, General regulations for air pollution sources.
- (5) "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs.

(6) "Ashes" means the residue including any air pollution flue dusts from combustion or incineration of material including solid wastes.

(7) "Balefill" means a landfill which uses compacted bales of solid waste to form discrete lifts as the landfill is filled.

(8) "Buffer zone" means that part of a facility that lies between the active area and the property boundary.

(9) "Bulky waste" means large items of refuse, such as appliances, furniture, and other oversize wastes which would typically not fit into reusable or disposable containers.

(10) "Clean soils and clean dredge spoils" means soils and dredge spoils which are not dangerous wastes or problem wastes as defined in this section.

(11) "Closure" means those actions taken by the owner or operator of a solid waste site or facility to cease disposal operations and to ensure that all such facilities are closed in conformance with applicable regulations at the time of such closures and to prepare the site for the post-closure period.

(12) "Collecting agency" means any agency, business or service operated by a person for the collecting of solid waste.

(13) "Compliance schedule" means a written schedule of required measures in a permit including an enforceable sequence leading to compliance with these regulations.

(14) "Composting" means the controlled degradation of organic solid waste yielding a product for use as a soil conditioner.

(15) "Container" means a device used for the collection, storage, and/or transportation of solid waste including but not limited to reusable containers, disposable containers, detachable containers and tanks, fixed or detachable.

(16) "Contaminate" means to allow to discharge a substance into groundwater that would cause:

(a) The concentration of that substance in the groundwater to exceed the maximum contamination level specified in WAC 173-304-9901, or

(b) A statistically significant increase in the concentration of that substance in the groundwater where the existing concentration of that substance exceeds the maximum contaminant level specified in WAC 173-304-9901, or

(c) A statistically significant increase above background in the concentration of a substance which:

(i) Is not specified in WAC 173-304-9901, and

(ii) Is present in the solid waste, and

(iii) Has been determined to present a substantial risk to human health or the environment in the concentrations found at the point of compliance by the jurisdictional health department in consultation with the department and the department of social and health services.

(17) "Cover material" means soil or other suitable material that has been approved by the jurisdictional health department as cover for wastes.

(18) "Dangerous wastes" means any solid waste designated as dangerous waste by the department under chapter 173-303 WAC.

(19) "Demolition waste" means solid waste, largely inert waste, resulting from the demolition or razing of buildings, roads and other man-made structures. Demolition waste consists of, but is not limited to, concrete, brick, bituminous concrete, wood and masonry, composition roofing and roofing paper, steel, and minor amounts of other metals like copper. Plaster (i.e., sheet rock or plaster board) or any other material, other than wood, that is likely to produce gases or a

leachate during the decomposition process and asbestos wastes are not considered to be demolition waste for the purposes of this regulation.

(20) "Department" means the department of ecology.

(21) "Detachable containers" means reusable containers that are mechanically loaded or handled such as a "dumpster" or drop box.

(22) "Disposable containers" means containers that are used once to handle solid waste such as plastic bags, cardboard boxes and paper bags.

(23) "Disposal" or "deposition" means the discharge, deposit, injection, dumping, leaking, or placing of any solid waste into or on any land or water.

(24) "Disposal site" means the location where any final treatment, utilization, processing, or deposition of solid waste occurs. See also the definition of interim solid waste handling site.

(25) "Drop box facility" means a facility used for the placement of a detachable container including the area adjacent for necessary entrance and exit roads, unloading and turn-around areas. Drop box facilities normally serve the general public with loose loads and receive waste from offsite.

(26) "Energy recovery" means the recovery of energy in a useable form from mass burning or refuse derived fuel incineration, pyrolysis or any other means of using the heat of combustion of solid waste that involves high temperature (above twelve hundred degrees Fahrenheit) processing.

(27) "Existing facility" means a facility which is owned or leased, and in operation, or for which construction has begun, on or before the effective date of this regulation and the owner or operator has obtained permits or approvals necessary under federal, state and local statutes, regulations and ordinances. A facility has commenced construction if either:

(a) A continuous on-site physical construction program has begun;

or

(b) The owner or operator has entered into contractual obligations which cannot be cancelled or modified without substantial financial loss for physical construction of the facility to be completed within a reasonable time.

Lateral extensions of a landfill's active area on land purchased and permitted by the jurisdictional health department for the purpose of landfilling before the effective date of this regulation shall be considered existing facilities.

(28) "Expanded facility" means a facility adjacent to an existing facility for which the land is purchased and approved by the jurisdictional health department after the effective date of this regulation. A vertical expansion approved and permitted by the jurisdictional health department after the effective date of this regulation shall also be considered an expanded facility.

(29) "Facility" means all contiguous land (including buffer zones) and structures, other appurtenances, and improvements on the land used for solid waste handling.

(30) "Facility structures" means buildings, sheds, utility lines, and drainage pipes on the facility.

(31) "Final treatment" means the act of processing or preparing solid waste for disposal, utilization, reclamation, or other approved method of use.

(32) "Free liquids" means any sludge which produces measurable liquids when the Paint Filter Liquids Test, Method 9095 of EPA Publication Number SW-846, is used.

(33) "One hundred-year flood plain" means any land area which is subject to one percent or greater chance of flooding in any given year from any source.

(34) "Garbage" means unwanted animal and vegetable wastes and animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food, swill and carcasses of dead animals, and of such a character and proportion as to be capable of attracting or providing food for vectors, except sewage and sewage sludge.

(35) "Groundwater" means that part of the subsurface water which is in the zone of saturation.

(36) "Holocene fault" means a fracture along which rocks on one side have been displaced with respect to those on the other side and that has occurred in the most recent epoch of the quaternary period extending from the end of the pleistocene to the present.

(37) "Incineration" means reducing the volume of solid wastes by use of an enclosed device using controlled flame combustion.

(38) "Interim solid waste handling site" means any interim treatment, utilization or processing site engaged in solid waste handling which is not the final site of disposal. Transfer stations, drop boxes, baling and compaction sites, source separation centers, and treatment are considered interim solid waste handling sites.

(39) "Industrial solid wastes" means waste by-products from manufacturing operations such as scraps, trimmings, packing, and other discarded materials not otherwise designated as dangerous waste under chapter 173-303 WAC.

(40) "Inert wastes" means noncombustible, nondangerous solid wastes that are likely to retain their physical and chemical structure under expected conditions of disposal, including resistance to biological attack and chemical attack from acidic rainwater.

(41) "Jurisdictional health department" means city, county, city-county or district public health department.

(42) "Landfill" means a disposal facility or part of a facility at which solid waste is permanently placed in or on land and which is not a landspreading disposal facility.

(43) "Landspreading disposal facility" means a facility that applies sludges or other solid wastes onto or incorporates solid waste into the soil surface at greater than vegetative utilization and soil conditioners/immobilization rates.

(44) "Leachate" means water or other liquid that has been contaminated by dissolved or suspended materials due to contact with solid waste or gases therefrom.

(45) "Local fire control agency" means a public or private agency or corporation providing fire protection such as a local fire department, the department of natural resources or the United States Forest Service.

(46) "Lower explosive limits" means the lowest percentage by volume of a mixture of explosive gases which will propagate a flame in air at twenty-five degrees centigrade and atmospheric pressure.

(47) "Medical waste" means all the infectious, and injurious waste originating from a medical, veterinary, or intermediate care facility.

(48) "New facility" means a facility which begins operation or construction after the effective date of this regulation (see also definition of "existing facility").

(49) "Nonconforming site" means a solid waste handling facility which does not currently comply with the facility requirements of WAC

173-304-400 but does comply with a compliance schedule issued in a solid waste permit by the jurisdictional health department.

(50) "Nuisance" consists in unlawfully doing an act, or omitting to perform a duty, which act or omission either annoys, injures, or endangers the comfort, repose, health or safety of others, offends decency, or unlawfully interferes with, obstructs or tends to obstruct, any lake or navigable river, bay, stream, canal, or basin, or any public park, square, street or highway; or in any way renders other persons insecure in life, or in the use of property.

(51) "Open burning" means the burning of solid waste materials in an open fire or an outdoor container without providing for the control of combustion or the control of emissions from the combustion.

(52) "Performance standard" means the criteria for the performance of solid waste handling facilities.

(53) "Permeability" means the ease with which a porous material allows liquid or gaseous fluids to flow through it. For water, this is usually expressed in units of centimeters per second and termed hydraulic conductivity. Soils and synthetic liners with a permeability for water of  $1 \times 10^{-7}$  cm/sec or less may be considered impermeable.

(54) "Permit" means an authorization issued by the jurisdictional health department which allows a person to perform solid waste activities at a specific location and which includes specific conditions for such facility operations.

(55) "Person" means an individual, firm, association, copartnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

(56) "Pile" means any noncontainerized accumulation of solid waste that is used for treatment or storage.

(57) "Plan of operation" means the written plan developed by an owner or operator of a facility detailing how a facility is to be operated during its active life and during closure and post-closure.

(58) "Point of compliance" means that part of groundwater that lies beneath the perimeter of a solid waste facilities' active area as that active area would exist at closure of the facility.

(59) "Post-closure" means the requirements placed upon disposal sites after closure to ensure their environmental safety for at least a twenty-year period or until the site becomes stabilized (i.e., little or no settlement, gas production, or leachate generation).

(60) "Premises" means a tract or parcel of land with or without habitable buildings.

(61) "Problem wastes" means: (a) Soils removed during the cleanup of a remedial action site, or a dangerous waste site closure or other cleanup efforts and actions and which contain harmful substances but are not designated dangerous wastes, or (b) dredge spoils resulting from the dredging of surface waters of the state where contaminants are present in the dredge spoils at concentrations not suitable for open water disposal and the dredge spoils are not dangerous wastes and are not regulated by section 404 of the Federal Clean Water Act (PL 95-217).

(62) "Processing" means an operation to convert a solid waste into a useful product or to prepare it for disposal.

(63) "Putrescible waste" means solid waste which contains material capable of being decomposed by micro-organisms.

(64) "Pyrolysis" means the process in which solid wastes are heated in an enclosed device in the absence of oxygen to vaporization,

producing a hydrocarbon-rich gas capable of being burned for recovery of energy.

(65) "Reclamation site" means a location used for the processing or the storage of recycled waste.

(66) "Reusable containers" means containers that are used more than once to handle solid waste such as garbage cans.

(67) "Runoff" means any rainwater, leachate or other liquid which drains over land from any part of the facility.

(68) "Run-on" means any rainwater or other liquid which drains over land onto any part of a facility.

(69) "Scavenging" means the removal of materials at a disposal site, or interim solid waste handling site without the approval of the owner or operator and the jurisdictional health department.

(70) "Septage" means a semisolid consisting of settled sewage solids combined with varying amounts of water and dissolved materials generated from a septic tank system.

(71) "Sludge" means a semisolid substance consisting of settled sewage solids combined with varying amounts of water and dissolved materials generated from a wastewater treatment plant or other source.

(72) "Sole source aquifer" means an aquifer designated by the Environmental Protection Agency pursuant to Section 1424e of the Safe Drinking Water Act (PL 93-523).

(73) "Solid waste" means all putrescible and nonputrescible solid and semisolid wastes, including but not limited to garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, abandoned vehicles or parts thereof, and discarded commodities. This includes all liquid, solid and semisolid, materials which are not the primary products of public, private, industrial, commercial, mining, and agricultural operations. Solid waste includes but is not limited to sludge from wastewater treatment plants and septage, from septic tanks, woodwaste, dangerous waste, and problem wastes.

(74) "Solid waste handling" means the management, storage, collection, transportation, treatment, utilization, processing or final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof.

(75) "Solid waste management" means the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment, and disposal of solid waste.

(76) "Storage" means the holding of solid waste materials for a temporary period.

(77) "Twenty-five year storm" means a storm of a particular duration and of such an intensity that it has a four percent probability of being equaled or exceeded each year.

(78) "Twenty-four hour, twenty-five year storm" means a twenty-five year storm of twenty-four hours duration.

(79) "Stream" means the point at which any confined freshwater body of surface water reaches a mean annual flow of twenty cubic feet per second.

(80) "Surface impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), and which is designed to hold an accumulation of liquids or sludges. The term includes holding, storage,



settling, and aeration pits, ponds, or lagoons, but does not include injection wells.

(81) "Surface water" means all lakes, rivers, ponds, streams, inland waters, salt waters and all other water and water courses within the jurisdiction of the state of Washington.

(82) "Transfer station" means a permanent, fixed, supplemental collection and transportation facility, used by persons and route collection vehicles to deposit collected solid waste from offsite into a larger transfer vehicle for transport to a solid waste handling facility. Transfer stations may also include recycling facilities.

(83) "Treatment" means the physical, chemical or biological processing of solid waste to make such solid wastes safer for storage or disposal, amenable for energy or material resource recovery or reduced in volume.

(84) "Utilization" means consuming, expending, or exhausting by use, solid waste materials.

(85) "Vaduz zone" means that portion of a geologic formation in which soil pores contain some water, the pressure of that water is less than atmospheric pressure, and the formation occurs above the zone of saturation.

(86) "Vector" means a living animal, insect or other arthropod which transmits an infectious disease from one organism to another.

(87) "Waste recycling" means reusing waste materials and extracting valuable materials from a waste stream.

(88) "Waste reduction" means reducing the amount or type of waste generated.

(89) "Water quality standard" means a standard set for maximum allowable contamination in surface waters as set forth in chapter 173-201 WAC, Water quality standards for waters of the state of Washington.

(90) "Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, estuaries, and similar areas.

(91) "Woodwaste" means solid waste consisting of wood pieces or particles generated as a by-product or waste from the manufacturing of wood products, handling and storage of raw materials and trees and stumps. This includes but is not limited to sawdust, chips, shavings, bark, pulp, hog fuel, and log sort yard waste, but does not include wood pieces or particles containing chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate.

(92) "Zone of saturation" means that part of a geologic formation in which soil pores are filled with water and the pressure of that water is equal to or greater than atmospheric pressure.

(93) "Buy-back recycling center" means any facility which collects, receives, or buys recyclable materials from household, commercial, or industrial sources for the purpose of accumulating, grading, or packaging recyclable materials for subsequent shipment and reuse, other than direct application to land.

(94) "Domestic wastewater facility" means all structures, equipment, or processes required to collect, carry away, treat, reclaim, or dispose of domestic wastewater together with such industrial waste as may be present.

(95) "Industrial wastewater facility" means all structures, equipment, or processes required to collect, carry away, treat, reclaim, or dispose of industrial wastewater.

(96) "Liquid" means a substance that flows readily and assumes the form of its container but retains its independent volume.

(97) "Reserved" means a section having no requirements and which is set aside for future possible rule-making as a note to the regulated community.

(98) "Limited purpose landfills" means a landfill that receives solid waste of limited types, known and consistent composition, other than woodwastes, garbage, inert waste, and demolition waste.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-100, filed 10/4/88. Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-100, filed 10/28/85.]

**WAC 173-304-130 Locational standards for disposal sites.** (1) Applicability. These standards apply to all new and expanded disposal sites including landfills, landspreading disposal sites, and piles and surface impoundments that are to be closed as landfills. These standards do not apply to:

(a) Existing facilities or facilities that have engaged in closure and closed before the effective date of this regulation;

(b) Interim solid waste handling sites;

(c) Energy recovery and incineration sites;

(d) Piles and surface impoundments used for storage, unless otherwise referred to in WAC 173-304-400, Solid waste handling facility standards;

(e) Utilization of sludge and other waste on land;

(f) Inert wastes and demolition wastes as defined in WAC 173-304-100 unless otherwise referred to in WAC 173-304-400, Solid waste handling facility standards; and

(g) Problem wastes, as defined in WAC 173-304-100.

(2) Locational standards. All applicable solid waste facilities shall be subject to the following locational standards:

(a) Geology. No facility shall be located over a holocene fault, in subsidence areas, or on or adjacent to geologic features which could compromise the structural integrity of the facility.

(b) Groundwater.

(i) No facility shall be located at a site where the bottom of the lowest liner is any less than ten feet above the seasonal high level of groundwater in the uppermost aquifer, or five feet when a hydraulic gradient control system or the equivalent has been installed to control groundwater fluctuations;

(ii) No landfill shall be located over a sole source aquifer; and

(iii) No facility's active area shall be located closer than one thousand feet to a down-gradient drinking water supply well, in use and existing at the time of the county's adoption of the comprehensive solid waste management plan unless the owner or operator can show that the active area is no less than ninety days travel time hydraulically to the nearest down-gradient drinking water supply well in the uppermost useable aquifer.

(c) Natural soils. See WAC 173-304-400, such as WAC 173-304-460

(3)(c)(i), landfill liners;

(d) Flooding. See WAC 173-304-400 such as WAC 173-304-460 (3)(d), landfill, floodplains;

(e) Surface water. No facility's active area shall be located within two hundred feet measured horizontally, of a stream, lake, pond, river, or salt water body, nor in any wetland nor any public land that is being used by a public water system for watershed control for municipal drinking water purposes in accordance with WAC 248-54-660(4);

(f) Slope. No facility's active area shall be located on any hill whose slope is unstable;

(g) Cover material. See WAC 173-304-400, such as WAC 173-304-460 (3)(e), landfills, closure;

(h) Capacity. See WAC 173-304-400, such as WAC 173-304-460, Land-filling standards, (for standards that vary according to capacity);

(i) Climatic factors. See WAC 173-304-400 such as WAC 173-304-460(3) landfill standards, (for standards applicable to arid climates);

(j) Land use. No facility shall be located:

(i) 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 a waiver is granted by the federal aviation administration. This requirement is only applicable where such facility is used for disposing of garbage such that a bird hazard to aircraft would be created;

(ii) In areas designated by the United States Fish and Wildlife Service or the department of game as critical habitat for endangered or threatened species of plants, fish, or wildlife;

(iii) So that the active area is any closer than one hundred feet to the facility property line for land zoned as nonresidential, except that the active area may be no closer than two hundred and fifty feet to the property line of adjacent land zoned as residential existing at the time of the county's adoption of the comprehensive solid waste management plan;

(iv) So as to be at variance with any locally-adopted land use plan or zoning requirement unless otherwise provided by local law or ordinance; and

(v) So that the active area is any closer than one thousand feet to any state or national park.

(k) Toxic air emissions. See WAC 173-304-400 such as WAC 173-304-460 (2)(b), landfill performance standards.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-130, filed 10/28/85.]

**WAC 173-304-190 Owner responsibilities for solid waste.** The owner, operator, or occupant of any premise, business establishment, or industry shall be responsible for the satisfactory and legal arrangement for the solid waste handling of all solid waste accumulated by them on the property.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-190, filed 10/28/85.]

**WAC 173-304-195 Permit required.** After approval by the department of the comprehensive solid waste plan required by RCW 70.95.100, no solid waste disposal site or facility shall be maintained, established, substantially altered, expanded or improved until the county,

city or other person operating or owning such site has obtained a permit from the jurisdictional health department pursuant to the provisions of WAC 173-304-600.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-195, filed 10/28/85.]

**WAC 173-304-200 On-site containerized storage, collection and transportation standards for solid waste.** (1) Applicability. These standards apply to all persons storing containerized solid waste generated on-site, and to all persons who are engaged in the collection and transportation of solid waste of more than one single family residence or single family farm including collection and transportation of septage and septic tank pumpings.

(2) On-site storage standards.

(a) The owner or occupant of any premises, business establishment, or industry shall be responsible for the safe and sanitary storage of all containerized solid wastes accumulated at that premises.

(b) The owner, operator, or occupant of any premises, business establishment, or industry shall store containerized solid wastes in containers that meet the following requirements:

(i) Disposable containers shall be sufficiently strong to allow lifting without breakage and shall be thirty-two gallons in capacity or less where manual handling is practiced;

(ii) Reusable containers, except for detachable containers, shall be:

(A) Rigid and durable;

(B) Corrosion resistant;

(C) Nonabsorbent and water tight;

(D) Rodent-proof and easily cleanable;

(E) Equipped with a close fitting cover;

(F) Suitable for handling with no sharp edges or other hazardous conditions; and

(G) Equal to or less than thirty-two gallons in volume where manual handling is practiced.

(iii) Detachable containers shall be durable, corrosion-resistant, nonabsorbent, nonleaking and having either a solid cover or screen cover to prevent littering.

(3) Collection and transportation standards.

(a) All persons collecting or transporting solid waste shall avoid littering, or the creation of other nuisances at the loading point, during transport and for the proper unloading of the solid waste at a permitted transfer station, or other permitted solid waste handling site.

(b) Vehicles or containers used for the collection and transportation of solid waste shall be tightly covered or screened where littering may occur, durable and of easily cleanable construction. Where garbage is being collected or transported, containers shall be cleaned as necessary to prevent nuisances, odors and insect breeding and shall be maintained in good repair.

(c) Vehicles or containers used for the collection and transportation of any solid waste shall be loaded and moved in such manner that the contents will not fall, leak in quantities to cause a nuisance, or spill therefrom. Where such spillage or leakage does occur, the waste shall be picked up immediately by the collector or trans-

porter and returned to the vehicle or container and the area otherwise properly cleaned.

(d) All persons commercially collecting or transporting solid waste shall inspect collection and transportation vehicles monthly, for repairs to containers such as missing or loose-fitting covers or screens, leaking containers, etc., and maintain such inspection records at the facility normally used to park such vehicles or such other location that maintenance records are kept. Such records shall be kept for a period of at least two years, and be made available upon the request of the jurisdictional health department.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-200, filed 10/28/85.]

**WAC 173-304-300 Waste recycling facility standards.** (1) Applicability.

(a) These standards apply to facilities engaged in recycling or utilization of solid waste on the land, including but not limited to:

- (i) Noncontainerized composting in piles;
- (ii) Utilization of sewage sludge, septage and other organic wastes on land for beneficial use;
- (iii) Accumulation of wastes in piles for recycling or utilization.

(b) These standards do not apply to:

- (i) Single family residences and single family farms engaged in composting of their own wastes;
- (ii) Facilities engaged in the recycling of solid waste containing garbage, such as garbage composting, which are subject to WAC 173-304-400, Solid waste handling facility standards;
- (iii) Facilities engaged in the storage of tires which are subject to WAC 173-304-400, Solid waste handling facility standards;
- (iv) Problem wastes as defined in WAC 173-304-100;
- (v) Facilities engaged in recycling of solid waste stored in surface impoundments which are subject to WAC 173-304-400, Solid waste handling facility standards; and
- (vi) Woodwaste or hog fuel piles to be used as fuel or raw materials stored temporarily in piles being actively used so long as the criteria of WAC 173-304-300 (3)(c)(i) are met.

(c) These standards do not apply to any facility that recycles or utilizes solid wastes in containers, tanks, vessels, or in any enclosed building, including buy-back recycling centers.

(2) Effective dates. All existing facilities recycling solid waste not in conformance with this section shall be placed upon a compliance schedule under WAC 173-304-600(1) to assure compliance within two years of the effective date of this regulation.

(3) Waste recycling requirements.

(a) All applicable solid waste recycling facilities shall apply for and obtain a solid waste permit under WAC 173-304-600, permits.

(b) Applicable waste recycling facilities shall submit annual reports to the jurisdictional health department and the department by March 1 of the following year for which the data is collected on forms supplied by the department. The annual reports shall include quantities and types of waste recycled for purposes of determining progress towards achieving the goals of waste reduction, waste recycling, and treatment in accordance with RCW 70.95.010(4). Such facilities may re-

quest and be assured of confidentiality for their reports in accordance with chapter 42.17 RCW and RCW 43.21A.160.

(c) All facilities storing solid waste in outdoor piles or surface impoundments for the purpose of waste recycling shall be considered to be storing or disposing of solid waste if:

(i) At least fifty percent of the material has not been shown to have been recycled in the past three years and any material has been on-site more than five years; or

(ii) Groundwater or surface water, air, and/or land contamination has occurred or will likely occur under current conditions of storage or in case of fire, or flood.

Upon such a determination by the jurisdictional health department that (c)(i) or (ii) of this subsection are met, the jurisdictional health department may require a permit application and issuance of a permit under WAC 173-304-600 of these rules.

(d) Waste recycling facilities shall allow jurisdictional health department and department representatives entry for inspection purposes and to determine compliance with these rules at reasonable times.

(e) All applicable waste recycling facilities shall not conflict with the county comprehensive solid waste management plan required by WAC 173-304-011 of these rules.

(f) All waste recycling facilities shall comply with applicable local, state and federal laws and regulations, including but not limited to environmental regulations and laws.

(4) Sewage sludge utilization requirements.

In addition to the requirements of subsection (3) of this section, all facilities utilizing sewage sludge, including septage shall comply with the department's *Municipal and Domestic Sludge Utilization Guidelines* WDOE 82-11, dated September 1982 or as hereafter amended. Facilities utilizing sewage sludge on the land in a manner not consistent with nor meeting the requirement of the guidelines are required to meet the landspreading disposal standards of WAC 173-304-450.

(5) Woodwaste and other organic sludge utilization requirements.

(a) Facilities utilizing woodwaste not otherwise excluded under WAC 173-304-015, shall comply with these recycling standards. Applying woodwaste and other primarily organic sludges such as pulp and paper mill treatment sludges to the land shall be in a manner consistent with the *Municipal and Domestic Sludge Utilization Guidelines* WDOE 82-11 dated September 1982 or as hereafter amended. Only agricultural or silvicultural sites where such sludges are demonstrated to have soil conditioning or fertilizer value shall be acceptable, provided that the woodwaste and other primarily organic sludges are applied as a soil conditioner or fertilizer in accordance with accepted agricultural and silvicultural practice. Facilities utilizing woodwaste or other primarily organic sludges on the land in a manner not consistent with nor meeting the requirement of the guidelines are required to meet the landspreading disposal standards of WAC 173-304-450.

(b) Facilities utilizing woodwaste or other primarily organic sludges shall also comply with the standards of subsection (3) of this section.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-300, filed 10/28/85.]

**WAC 173-304-400 Solid waste handling facility standards.** (1) Applicability. The standards of WAC 173-304-405 through 173-304-490

are the solid waste handling facility standards and apply to all solid waste handling facilities, except for:

(a) Waste recycling facilities, whose standards are spelled out in WAC 173-304-300;

(b) On-site containerized storage, collection and transportation facilities which are spelled out in WAC 173-304-200;

(c) Single family residences and single family farms whose year round occupants engage in solid waste handling of the single family's solid waste on-site;

(d) Problem wastes as defined in WAC 173-304-100;

(e) Solid waste handling facilities that have engaged in closure and closed before the effective date of this regulation; and

(f) Domestic wastewater facilities and industrial wastewater facilities otherwise regulated by federal, state, or local water pollution permits except for any portion that utilizes or engages in land-spreading disposal sludges or solid residues directly on the land.

(2) Standards for permits. The standards of WAC 173-304-405 through 173-304-490 shall be used as the basis for permitting as required in WAC 173-304-600.

(3) Effective dates.

(a) All existing facilities not in conformance with the following sections of the facility standards shall be placed upon compliance schedules under WAC 173-304-600 (1)(c) to assure full compliance within eighteen months of the effective date of this regulation for:

(i) The general facility standards, WAC 173-304-405;

(ii) The transfer stations, baling and compaction standards, WAC 173-304-410;

(iii) Groundwater monitoring required in WAC 173-304-490;

(iv) The landfill operating and maintenance standards, WAC 173-304-460(4);

(v) The tire pile standards of WAC 173-304-420(4); and

(vi) The landspreading disposal standards of WAC 173-304-450(5).

(b) All applicable solid waste facilities shall be in compliance with the general closure and post-closure standards of WAC 173-304-407 and the financial assurance standards of WAC 173-304-467 and 173-304-468 by twelve months after the effective date of WAC 173-304-407, 173-304-467, and 173-304-468, except for owners or operators of existing facilities that have a closure plan approved by the jurisdictional health department in a solid waste permit issued before the effective date of these amendments and are closing before November 27, 1989. Existing solid waste facilities shall be placed upon compliance schedules under WAC 173-304-600 (1)(c) to assure compliance by the effective date of this subsection.

(c) All existing solid waste facilities not in conformance with facility standards other than those in (a) and (b) of this subsection shall be placed upon compliance schedules under WAC 173-304-600 (1)(c) to assure full compliance within four years of the effective date of this regulation.

(d) All new and expanded facilities other than those in (b) of this subsection shall meet the facility standards of WAC 173-304-405 to 173-304-490 after the effective date of this regulation.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-400, filed 10/4/88. Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-400, filed 10/28/85.]

**WAC 173-304-405 General facility requirements.** (1) Applicability. All applicable solid waste handling facilities shall meet the requirements of this section.

(2) Plan of operation. Each owner or operator shall develop, keep and abide by a plan of operation approved as part of the permitting process in WAC 173-304-600. The plan shall describe the facilities' operation and shall convey to site operating personnel the concept of operation intended by the designer. The plan of operation shall be available for inspection at the request of the jurisdictional health officer. The facility must be operated in accordance with the plan or the plan must be so modified with the approval of the jurisdictional health department. Owners or operators of drop boxes may develop a generic plan of operation applicable to all such drop boxes, owned or operated.

Each plan of operation shall include:

(a) How solid wastes are to be handled on-site during its active life;

(b) How inspections and monitoring are conducted and their frequency;

(c) Actions to take if there is a fire or explosion;

(d) Actions to take if leaks are detected;

(e) Corrective action programs to take if groundwater is contaminated;

(f) Actions to take for other releases (e.g. failure of run-off containment system);

(g) How equipment such as leachate collection and gas collection equipment are to be maintained;

(h) A safety plan or procedure; and

(i) Other such details as required by the jurisdictional health department.

(3) Recordkeeping. Each owner or operator shall maintain daily operating records on the weights (or volumes), number of vehicles entering and, if available, the types of wastes received. Major deviations from the plan of operation shall also be noted on the operating record.

(4) Reporting. Each owner or operator shall prepare and submit a copy of an annual report to the jurisdictional health department and the department by March 1 of each year. The annual report shall cover facility activities during the previous year and must include the following information:

(a) Name and address of the facility;

(b) Calendar year covered by the report;

(c) Annual quantity, in tons, or volume, in cubic yards, and estimated in-place density in pounds per cubic yard of solid waste handled, by type of solid waste if available, for each type of treatment, storage, or disposal facility, including applicable recycling facilities; and

(d) Results of groundwater monitoring required in WAC 173-304-490.

(5) Inspections. The owner or operator shall inspect the facility to prevent malfunctions and deterioration, operator errors and discharges which may cause or lead to the release of wastes to the environment or a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment. The owner or operator shall keep an inspection log or summary including at least the date and time of inspection, the printed name and the hand-



written signature of the inspector, a notation of observations made and the date and nature of any repairs or corrective action. The log or summary must be kept at the facility or other convenient location if permanent office facilities are not on-site, for at least three years from the date of inspection. Inspection records shall be available to the jurisdictional health department upon request.

(6) Recording with county auditor. Maps and a statement of fact concerning the location of the disposal site shall be recorded as part of the deed with the county auditor not later than three months after closure. Records and plans specifying solid waste amounts, location and periods of operation shall be submitted to the local zoning authority or the authority with jurisdiction over land use and be made available for inspection.

(7) State and local requirements. All solid waste disposal facilities shall comply with all state and local requirements such as zoning land use, fire protection, water pollution prevention, air pollution prevention, nuisance and aesthetics.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-405, filed 10/4/88. Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-405, filed 10/28/85.]

**WAC 173-304-407 General closure and post-closure requirements.**

(1) Applicability. The requirements of subsections (2), (3), (4), and (5) of this section apply to all solid waste handling facilities. The requirements of subsections (6), (7), and (8) of this section apply to:

(a) Landfills subject to WAC 173-304-460 including limited purpose landfills under WAC 173-304-460(5);

(b) Surface impoundments under WAC 173-304-430 (2)(g) closed with waste remaining in place;

(c) Woodwaste landfills under WAC 173-304-462; and

(d) Landspreading disposal facilities under WAC 173-304-450(2).

(2) Effective dates. Existing facilities subject to the requirements of this section shall meet the applicable facility standards of this section within twelve months of the effective date of this regulation. All new or expanded facilities subject to the requirements of this section shall meet the applicable facility standards on the effective date of this regulation.

(3) Closure performance standard. Each owner or operator shall close their facility in a manner that:

(a) Minimizes the need for further maintenance;

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

(c) Prepares the facility for the post-closure period.

(4) Closure plan and amendment(s). Closure as defined in WAC 173-304-100(11), includes but is not limited to grading, seeding, landscaping, contouring, and/or screening. For interim solid waste handling sites, closure includes waste removal and decontamination of the site.

(a) Each owner or operator shall develop, keep and abide by a plan of closure approved by the jurisdictional health department as part of the permitting process in WAC 173-304-600.

(b) The closure plan shall project time intervals at which sequential partial closure is to be implemented, and identify closure cost estimates and projected fund withdrawal intervals for the associated closure costs, from the approved financial assurance instrument.

(c) Each owner or operator shall not commence disposal operations in any part of a facility until a closure plan for the entire facility has been approved by the jurisdictional health department, and until a financial assurance instrument has been provided, as required by applicable laws and regulations.

(d) The jurisdictional health department shall approve, disapprove, or require amendment of the closure plan as part of the permitting process of WAC 173-304-600 in accordance with applicable laws and regulations.

(e) Each owner and operator shall close the facility in accordance with the approved closure plan and all approved amendments.

(5) Closure procedures.

(a) Each owner and operator shall notify the jurisdictional health department and where applicable, the financial assurance instrument trustee, of the intent to implement the closure plan in part or whole, no later than one hundred eighty days prior to the projected final receipt of waste at the entire facility unless otherwise specified in the closure plan.

(b) The owner or operator shall 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 facility as identified in the approved facility closure plan unless otherwise specified in the closure plan.

(c) Waste shall not be accepted for disposal or for use in closure except as identified in the closure plan approved by the jurisdictional health department, as required in subsection (3)(a) of this section.

(d) When facility closure is completed in part or whole, each owner and operator shall submit the following to the jurisdictional health department:

(i) Facility closure plan sheets signed by a professional engineer registered in the state of Washington and modified as necessary to represent as-built changes to final closure construction as approved in the closure plan;

(ii) Certification by the owner or operator, and a professional engineer registered in the state of Washington that the site has been closed in accordance with the approved closure plan.

(e) The jurisdictional health department shall notify the owner or operator and the department of ecology of the date when the facility post-closure period has begun, which period shall commence when the jurisdictional health department has verified the facility has been closed in accordance with the specifications of the approved closure plan and the closure requirements of this section.

(6) Post-closure performance standard. Each owner or operator shall provide post-closure activities to allow for continued facility maintenance and monitoring of air, land, and water as long as necessary for the facility to stabilize and to protect human health and the environment.

(7) Post-closure plan and amendment. For disposal facilities; post-closure includes groundwater monitoring; surface water monitoring; gas monitoring; and maintenance of the facility, facility structures, and monitoring systems for their intended use for a period of

twenty years and any other activities deemed appropriate by the jurisdictional health department.

(a) Each owner or operator shall develop, keep and abide by a post-closure plan approved as a part of the permitting process in WAC 173-304-600. The post-closure plan shall address facility maintenance and monitoring activities for at least a twenty-year period or until the site becomes stabilized (i.e., little or no settlement, gas production or leachate generation), and monitoring of groundwater, surface water, and gases can be safely discontinued.

(b) The post-closure plan shall 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.

(c) Each owner or operator shall not commence disposal operations in any part of a facility until a post-closure plan for the entire facility has been approved by the jurisdictional health department, and until a financial assurance instrument has been provided where applicable, as required by WAC 173-304-467.

(d) Each owner or operator shall complete the post-closure activities in accordance with the approved post-closure plan and schedule. Facility post-closure activities shall be completed in accordance with the approved post-closure plan or the plan shall be so amended with the approval of the jurisdictional health department.

(e) The jurisdictional health department may determine that a facility post-closure plan is invalid and require an owner or operator to amend the facility post-closure plan.

(i) The health department may direct facility post-closure activities, in part or whole, to cease until the post-closure plan amendment has received written approval by the health department.

(ii) When the health department determines a facility post-closure amendment is required, the health department shall, after consultation with the owner/operator, designate a compliance schedule for submittal of the amendment and its review and approval by the department.

(8) Post-closure procedures.

(a) Each owner or operator shall commence post-closure activities after completion of closure activities outlined in subsection (5)(d)(i) and (ii) of this section. The jurisdictional health department may direct that post-closure activities cease until the owner or operator receives a notice to proceed with post-closure activities.

(b) When post-closure activities are complete, the owner or operator shall certify 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 (i.e., little or no settlement, gas production, or leachate generation).

(c) If the jurisdictional health department finds that post-closure monitoring has established that the facility is stabilized (i.e., little or no settlement, gas production, or leachate generation), the health department may authorize the owner or operator to discontinue post-closure maintenance and monitoring activities.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-407, filed 10/4/88.]

**WAC 173-304-410 Transfer stations, baling and compaction systems, and drop box facilities.** (1) Applicability. All transfer stations, baling and compaction systems and drop boxes receiving solid waste from offsite shall meet the requirements of this section. Facilities receiving solid waste from on-site shall meet the requirements of WAC 173-304-200.

(2) Transfer stations, baling and compacting systems standards. Transfer stations, baling and compaction systems shall be designed, constructed, and operated so as to:

(a) Be surrounded by a fence, trees, shrubbery, or natural features so as to control access and be screened from the view of immediately adjacent neighbors, unless the tipping floor is fully enclosed by a building;

(b) Be sturdy and constructed of easily cleanable materials;

(c) Be free of potential rat harborages, and provide effective means to control rodents, insects, birds and other vermin;

(d) Be adequately screened to prevent blowing of litter and to provide effective means to control litter;

(e) Provide protection of the tipping floor from wind, rain or snow other than below grade bins or detachable containers;

(f) Have an adequate buffer zone around the operating area to minimize noise and dust nuisances, and for transfer stations, baling, or compaction systems, a buffer zone of fifty feet from the active area to the nearest property line in areas zoned residential;

(g) Comply with local zoning and building codes including approved local variances and waivers;

(h) Provide pollution control measures to protect surface and groundwaters, including runoff collection and discharge designed and operated to handle a twenty-four hour, twenty-five year storm and equipment cleaning and washdown water;

(i) Provide all-weather approach roads, exit roads, and all other vehicular areas;

(j) Provide pollution control measures to protect air quality including a prohibition against all burning and the development of odor and dust control plans to be made a part of the plan of operation in WAC 173-304-405(2);

(k) Prohibit scavenging;

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

(m) Have a sign that identifies the facility and shows at least the name of the site, and, if applicable, hours during which the site is open for public use, what constitutes materials not to be accepted and other necessary information posted at the site entrance;

(n) Have communication capabilities to immediately summon fire, police, or emergency service personnel in the event of an emergency; and

(o) Remove all wastes at closure, as defined in WAC 173-304-100, from the facility to a permitted facility.

(3) Drop box facility standards. Drop box facilities, as defined in WAC 173-304-100, shall:

(a) Be constructed of durable water tight materials with a lid or screen on top that prevents the loss of materials during transport and access by rats and other vermin;

(b) Be located in an easily identifiable place accessible by all-weather roads;

(c) Be designed and serviced as often as necessary to ensure adequate dumping capacity at all times. Storage of solid waste outside the drop boxes is prohibited;

- (d) Comply with subsection (2)(m) of this section, signs; and
- (e) Remove all remaining wastes at closure, as defined in WAC 173-304-100, to a permitted facility, and remove the drop box from the facility.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-410, filed 10/28/85.]

**WAC 173-304-420 Piles used for storage and treatment—Facility standards.** (1) Applicability.

(a) This section is applicable to solid wastes stored or treated in piles as defined in WAC 173-304-100 where putrescible wastes (other than garbage) are in place for more than three weeks, other wastes not intended for recycling are in place for more than three months, and garbage is in place for more than three days. These standards are also applicable to composting or storing of garbage and sludge in piles, and to tire piles where more than eight hundred tires are stored at one facility.

(b) Other solid wastes stored or treated in piles prior to waste recycling including compost piles of vegetative waste, piles of wood-waste used for fuel or raw materials are subject to WAC 173-304-300.

(c) Waste piles stored in fully enclosed buildings are not subject to these standards, provided that no liquids or sludges with free liquids are added to the pile.

(d) Inert wastes and demolition wastes are not subject to these standards.

(2) Requirements. All owners and operators shall:

(a) Comply with the requirements of the General facility requirements, WAC 173-304-405;

(b) Design piles located in a one hundred-year flood plain to:

(i) Comply with local flood plain management ordinances and chapter 508-60 WAC, Administration of flood control zones; and

(ii) To avoid washout or restriction of flow; and

(c) Remove all solid wastes from the pile at closure to another permitted facility.

(3) Requirements for putrescible wastes or wastes likely to produce leachate.

(a) Waste piles shall be placed upon a surface such as sealed concrete, asphalt, clay or an artificial liner underlying the pile, to prevent subsurface soil and potential groundwater contamination and to allow collection of runoff and leachate. The liner shall be designed of sufficient thickness and strength to withstand stresses imposed by pile handling vehicles and the pile itself;

(b) Runoff systems shall be installed, designed and maintained to handle a twenty-four hour, twenty-five year storm event;

(c) Waste piles having a capacity of greater than ten thousand cubic yards shall have either:

(i) A groundwater monitoring system that complies with WAC 173-304-490; or

(ii) A leachate detection, collection and treatment system.

For purposes of this subsection, capacity refers to the total capacity of all putrescible or leachate-generating piles at one facility (i.e., two, five thousand cubic yard piles will subject the facility to the requirements of this subsection).

(d) Run-on prevention systems shall be designed and maintained to handle the maximum flow from a twenty-five year storm event; and

(e) A jurisdictional health department may require that the entire base or liner shall be inspected for wear and integrity and repaired or replaced by removing stored wastes or otherwise providing inspection access to the base or liner; the request shall be in writing and cite the reasons including valid groundwater monitoring or leachate detection data leading the jurisdictional health department to request such an inspection, repair or replacement.

(4) Requirements for tire piles. Owners or operators shall:

(a) Control access to the tire pile by fencing;

(b) Limit the tire pile to a maximum of one-half acre in size;

(c) Limit the height of the tire pile to twenty feet;

(d) Provide for a thirty foot fire lane between tire piles; and

(e) Provide on-site fire control equipment.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-420, filed 10/28/85.]

**WAC 173-304-430 Surface impoundment standards.** (1) Applicability.

(a) These standards are applicable to solid wastes that are liquids or sludges containing free liquids as defined in WAC 173-304-100 and applicable under WAC 173-304-015(2) and are stored or treated in surface impoundments;

(b) These standards are also applicable to sludges and septage stored or treated in surface impoundments; and

(c) These standards are not applicable to:

(i) Surface impoundments whose facilities and discharges are otherwise regulated under federal, state, or local water pollution permits; and

(ii) Retention or detention basins used to collect and store stormwater runoff.

(2) Requirements. All surface impoundments must be designed, constructed, and operated so as to:

(a) Meet the performance standards of WAC 173-304-460(2);

(b) Have an in-place or imported soil liner of at least two feet of  $1 \times 10^{-7}$  cm/sec permeability or an equivalent combination of any thickness greater than two feet and a greater permeability to protect the underlying aquifers or a thirty mil reinforced artificial liner placed on top of a structurally stable foundation to support the liners and solid waste and to prevent settlement that would destroy the liner; natural soils shall be recompacted to achieve an equivalent permeability. Owners or operators shall be allowed to use alternative designs, operating practices and locational characteristics which prevent migration of solid waste constituents or leachate into the ground or surface waters at least as effectively as the liners described in this subsection;

(c) Avoid washout including the use of an extended liner or dikes or restriction of flow in the one hundred year flood plain and to comply with local flood plain management ordinances and chapter 508-60 WAC, Administration of flood control zones;

(d) Have dikes designed with slopes so as to maintain the structural integrity under conditions of a leaking liner and capable of withstanding erosion from wave action;

(e) Have the freeboard equal to or greater than eighteen inches to avoid overtopping from wave action, overfilling, or precipitation;

(f) Have either a groundwater monitoring system, or a leachate detection, collection and treatment system, for surface impoundments having a capacity of more than two million gallons unless the jurisdictional health department and the department require either for smaller surface impoundments. For purposes of this subsection, capacity refers to the total capacity of all surface impoundments on-site (i.e., two, one million gallon surface impoundments on one site will trigger these monitoring requirements);

(g) Be closed in a manner which removes all solid wastes including liners, etc. to another permitted facility and the site returned to its original or acceptable topography except that surface impoundments closed with the waste remaining in place shall meet the requirements of WAC 173-304-407 and 173-304-130;

(h) A jurisdictional health department may require that the liner be inspected for wear and integrity and repaired or replaced by removing stored solid wastes or otherwise inspecting the liner or base at any time. The request shall be in writing and cite the reasons including valid groundwater monitoring or leachate detection data leading to such an inspection and repair;

(i) Surface impoundments containing septage will also be subject to the department's "criteria for sewage works design" used to review plans for septage surface impoundments; and

(j) Surface impoundments that have the potential to impound more than ten acre-feet of waste measured from the top of the dike and which would be released by a failure of the containment dike shall be reviewed and approved by the dam safety section of the department.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-430, filed 10/4/88. Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-430, filed 10/28/85.]

**WAC 173-304-440 Energy recovery and incinerator standards.** (1) Applicability. These standards apply to all facilities designed to burn more than twelve tons of solid waste per day, except for facilities burning woodwaste or gases recovered at a landfill.

(2) Requirements for energy recovery facilities and incinerators.

(a) Incinerators and energy recovery facilities storing putrescible wastes shall be confined to storage compartments specifically designed to store wastes temporarily in piles, surface impoundments, tanks or containers. The storage facilities shall meet the facility standards of WAC 173-304-400. Storage of wastes other than in the specifically designed storage compartments is prohibited. Equipment and space shall be provided in the storage and charging areas, and elsewhere as needed, to allow periodic cleaning as may be required in order to maintain the plant in a sanitary and clean condition;

(b) All residues from energy recovery facilities or incinerator facilities shall be used, handled or disposed of as solid or dangerous wastes according to these standards or the standards of the dangerous waste regulation, chapter 173-303 WAC;

(c) Each owner or operator of an energy recovery facility or incinerator facility shall comply with WAC 173-304-405. The plan of operation shall address alternative storage, and/or disposal plans for all breakdowns that would result in overfilling of the storage facility;

(d) Energy recovery facilities and incinerators must be designed, constructed and operated in a manner to comply with appropriate state and local air pollution control authority emission and operating requirements;

(e) Each owner or operator shall close their energy recovery facility or incinerator by removing all ash, solid wastes and other residues to a permitted facility;

(f) Each owner or operator of an energy recovery facility or incinerator shall be required to provide recycling facilities in a manner equivalent to WAC 173-304-460 (4)(f); and

(g) Owners or operators of energy recovery facilities or incinerators shall not knowingly dispose of, treat, store or otherwise handle dangerous waste unless the requirements of chapter 173-303 WAC are met.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-440, filed 10/28/85.]

**WAC 173-304-450 Landspreading disposal standards.** (1) Applicability. These standards apply to facilities that engage in landspreading disposal of solid wastes. These standards do not apply to:

(a) Facilities utilizing sludge, woodwaste or other primarily organic sludges according to the *Municipal and Domestic Sludge Utilization Guidelines* WDOE 82-11, specified in WAC 173-304-300 (4) and (5);

(b) Agricultural solid wastes resulting from the operation of a farm including farm animal manure and agricultural residues; and

(c) Inert wastes and demolition wastes.

(2) Owners or operators of landspreading disposal facilities shall meet the minimum functional standards for performance of WAC 173-304-460(2) and the general facilities standards of WAC 173-304-405.

(3) Owners or operators of landspreading disposal facilities shall meet the locational standards of WAC 173-304-130.

(4) Minimum functional standard for design. Owners or operators of landspreading disposal facilities shall design landspreading facilities so as to:

(a) Provide interim waste storage facilities that meet the requirements of WAC 173-304-400 standards (i.e., for piles, surface impoundments, etc.);

(b) Collect and treat all runoff from a twenty-four hour, twenty-five year storm, and divert all run-on for the maximum flow of a maximum twenty-five year storm around the active area;

(c) Avoid standing water anywhere on the active area;

(d) Avoid slopes and other features that will lead to soil and waste erosion, unless contour plowing or other measures are taken to avoid erosion;

(e) Monitor groundwater according to WAC 173-304-490; and

(f) Control access to site by fencing or other means and erect signs.

(5) Minimum functional standards for maintenance and operation. Owners or operators of landspreading disposal facilities shall maintain and operate the facilities so as to:

(a) Avoid any landspreading disposal of garbage or medical waste;

(b) Analyze solid wastes according to the requirements spelled out in the *Municipal and Domestic Sludge Utilization Guidelines* WDOE 82-11;



(c) Avoid applying wastes at rates greater than ten times agronomic rates using the proposed cover crop, or depths greater than would allow for discing the soil by tracked vehicles;

(d) Provide discing of soils during the growing season and after each application of waste to maintain aerobic soil conditions, minimize odors and lessen runoff;

(e) Avoid applying waste to any active area having standing water;

(f) Conform to the operating plan and the requirements of WAC 173-304-405;

(g) Avoid food chain crops during the active life of the facility and until demonstrated to be safe, after closure, according to the closure and post-closure plans filed with the plan of operation. Specific approval in writing from the jurisdictional health department is required for any landspreading disposal facility that is used to raise food crops after closure. Any new owner or operator of a closed landspreading disposal facility shall notify the jurisdictional health department within sixty days of the purchase; and

(h) Provide for a written contract between landowners, waste generators, waste haulers and waste operators requiring compliance with rules as a condition of the contract.

(6) Minimum functional standards for closure.

(a) All owners or operators of landspreading disposal facilities shall close in such a manner as to comply with WAC 173-304-407;

(b) Financial assurance. All owners or operators of landspreading disposal facilities shall have a written estimate, in current dollars, of the cost of closing the facility. The closure cost estimate must equal the cost of closure at the point in the operating life of the facility when the extent and manner of operation would make closure the most expensive, as indicated by the closure plan.

In addition, all facilities shall have a written post-closure estimate, in current dollars, the cost of post-closure monitoring and maintenance during the post-closure period.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-450, filed 10/4/88. Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-450, filed 10/28/85.]

**WAC 173-304-460 Landfilling standards.** (1) Applicability. These standards apply to facilities that dispose of solid waste in landfills except for:

(a) Inert wastes and demolition wastes landfills, that must meet WAC 173-304-461 standards; and

(b) Woodwaste landfills that must meet WAC 173-304-462 standards.

(2) Minimum functional standards for performance.

(a) Groundwater. An owner or operator of a landfill shall not contaminate the groundwater underlying the landfill, beyond the point of compliance. Contamination and point of compliance are defined in WAC 173-304-100.

(b) Air quality and toxic air emissions.

(i) An owner or operator of a landfill shall not allow explosive gases generated by the facility whose concentration exceeds:

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

(B) The lower explosive limit for the gases at the property boundary or beyond; and

(C) One hundred parts per million by volume of hydrocarbons (expressed as methane) in offsite structures.

(ii) An owner or operator of a landfill shall not cause a violation of any ambient air quality standard at the property boundary or emission standard from any emission of landfill gases, combustion or any other emission associated with a landfill.

(c) Surface waters. An owner or operator of a landfill shall not cause a violation of any receiving water quality standard or violate chapter 90.48 RCW from discharges of surface runoff, leachate or any other liquid associated with a landfill.

(3) Minimum functional standards for design.

(a) Minimizing liquids. All owners or operators of landfills shall minimize liquids admitted to active areas of landfills by:

(i) Covering according to WAC 173-304-460 (4) (d);

(ii) Prohibiting the disposal of noncontainerized liquids or sludges containing free liquids in landfills unless approved by the jurisdictional health department;

(iii) Designing the landfill to prevent all the run-on of surface waters and other liquids resulting from a maximum flow of a twenty-five year storm into the active area of the landfill;

(iv) Designing the landfill to collect the runoff of surface waters and other liquids resulting from a twenty-four hour, twenty-five year storm from the active area and the closed portions of a landfill;

(b) Leachate systems. All owners or operators of landfills shall:

(i) Install a leachate collection system sized according to water balance calculations or using other accepted engineering methods either of which shall be approved by the jurisdictional health department;

(ii) Install a leachate collection system so as to prevent no more than two feet of leachate developing at the topographical low point of the active area; and

(iii) Install a leachate treatment, or a pretreatment system if necessary in the case of discharge to a municipal waste water treatment plant, to meet the requirements for permitted discharge under chapter 90.48 RCW and the Federal Clean Water Act (PL 95-217).

(c) Liner designs. All owners or operators of landfills shall use liners of one of the following designs:

(i) Standard design. The liner shall be constructed of at least a four feet thick layer of recompacted clay or other material with a permeability of no more than  $1 \times 10^{-7}$  cm/sec and sloped no less than two percent; or

(ii) Alternative design. The design shall have two liners:

(A) An upper liner of at least fifty mils thickness made of synthetic material; and

(B) A lower liner of at least two feet thickness of recompacted clay or other material with a permeability of no more than  $1 \times 10^{-6}$  cm/sec and sloped no less than two percent; or

(iii) Equivalent design. The design shall use alternative methods, operating practices and locational characteristics which will minimize the migration of solid waste constituents or leachate into the ground or surface water at least as effectively as the liners of (c) (i) and (ii) of this subsection; or

(iv) Arid design. This design will apply to locations having less than twelve inches of precipitation annually, and, in lieu of (c) (i),

(ii), and (iii) of this subsection, shall consist of vadose zone moisture monitoring, provided that:

(A) Waste material is no less than ten feet above the seasonal high level of groundwater in the uppermost aquifer; and

(B) Any evidence of leachate or waste constituents detected in the vadose zone that violates or could be expected to violate the performance standard of WAC 173-304-460(2) shall cause the owner or operator to:

(I) Take corrective action, and either

(II) Close the facility according to these rules, or

(III) For all future expansions at that facility, meet the liner requirement of (c)(i) or (ii) of this subsection.

(v) Small landfill designs. For a landfill whose design and permit allow a total capacity at closure of two hundred thousand cubic yards or less, the need for a liner and leachate collection system shall be determined on a case-by-case basis by the jurisdictional health department in consultation with the department.

(d) Flood plains. All owners or operators of landfills that are located in a one hundred-year flood plain shall:

(i) Comply with local flood plain management ordinances and chapter 508-60 WAC, Administration of flood control zones; and

(ii) Design the landfill so that the landfill entrance or exit roads or practices shall 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, so as to pose a hazard to human life, wildlife, land or water resources.

(e) Closure. All owners and operators shall design landfills so that at closure:

(i) At least two feet of  $1 \times 10^{-6}$  cm/sec or lower permeability soil or equivalent shall be placed upon the final lifts unless the landfill is located in an area having mean annual precipitation of less than twelve inches in which case at least two feet of  $1 \times 10^{-5}$  cm/sec or lower permeability soil or equivalent shall be placed upon the final lifts. Artificial liners may replace soil covers provided that a minimum of fifty mils thickness is used;

(ii) The grade of surface slopes shall not be less than two percent, nor the grade of side slopes more than thirty-three percent; and

(iii) Final cover of at least six inches of topsoil be placed over the soil cover and seeded with grass, other shallow rooted vegetation or other native vegetation.

(f) Gas control.

(i) All owners and operators shall design landfills, having a permitted capacity of greater than ten thousand cubic yards per year, so that methane and other gases are continuously collected, and

(A) Purified for sale;

(B) Flared; or

(C) Utilized for its energy value.

(ii) Collection and handling of landfill gases shall not be required if it can be shown that little or no landfill gases will be produced or that landfill gases will not support combustion; in such cases installation of vents shall be required.

(g) Other requirements. All owners and operators of landfills shall design landfills to:

(i) Be fenced at the property boundary or use other means to impede entry by the public and animals. A locale gate shall be required at the entry to the landfill;

(ii) Monitor groundwater according to WAC 173-304-490 using a design approved by the local jurisdictional health department with the guidance of the department. The jurisdictional health department may also require monitoring of:

- (A) Surface waters, including runoff;
- (B) Leachate;
- (C) Subsurface landfill gas movement and ambient air; and
- (D) Noise.

(iii) Weigh all incoming waste on scales for landfills having a permitted capacity of greater than ten thousand cubic yards per year or provide an equivalent method of measuring waste tonnage capable of estimating total annual solid waste tonnage to within plus or minus five percent;

(iv) Provide for employee facilities including shelter, toilets, hand washing facilities and potable drinking water for landfills having the equivalent of three or more full-time employees;

(v) Erect a sign at the site entrance that identifies at least the name of site, if applicable, the hours during which the site is open for public use, unacceptable materials and an emergency telephone number. Other pertinent information may be required by the jurisdictional health department;

(vi) Provide on-site fire protection as determined by the local and state fire control jurisdiction;

(vii) Prevent potential rat and other vectors (such as insects, birds, and burrowing animals) harborage in buildings, facilities, and active areas;

(viii) Provide the unloading area(s) to be as small as possible, consistent with good traffic patterns and safe operation;

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

(x) Provide communication between employees working at the landfill and management offices on-site and offsite (such as telephones) to handle emergencies.

(4) Minimum functional standards for maintenance and operation.

(a) Operating plans. All owners or operators of landfills shall maintain and operate the facility so as to conform to the approved plan of operation.

(b) Operating details. All owners or operators of landfills shall operate the facility so as to:

(i) Control road dust;

(ii) Perform no open burning unless permitted by the jurisdictional air pollution control agency or the department under the Washington Clean Air Act, chapter 70.94 RCW. Garbage shall not be open burned.

(iii) Collect scattered litter as necessary to avoid a fire hazard or an aesthetic nuisance;

(iv) Prohibit scavenging;

(v) Conduct on-site reclamation in an orderly sanitary manner, and in a way that does not interfere with the disposal site operation;

(vi) Insure that at least two landfill personnel are on-site with one person at the active face when the site is open to the public for landfills with a permitted capacity of greater than fifty thousand cubic yards per year;

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

(viii) Insure that reserve operational equipment shall be available to maintain and meet these standards.

(c) Boundary posts. All owners or operators of landfills shall clearly mark the active area boundaries authorized in the permit, with permanent posts or using equivalent method clearly visible for inspection purposes.

(d) Compaction and daily cover. All owners or operators of landfills shall:

(i) Thoroughly compact the solid waste before succeeding layers are added; and

(ii) Cover compacted waste containing garbage fully with at least six inches of compacted cover material after each day of operation. The jurisdictional health department may allow less frequent covering by considering:

(A) The characteristics of the solid waste;

(B) The climatic and geologic setting;

(C) The size of the facility; and

(D) The potential for nuisance conditions.

(e) Monitoring systems. All owners and operators of landfills shall maintain the monitoring system required in subsection (3)(g)(ii) of this section.

(f) Recycling required.

(i) All owners or operators of landfills at which the general public delivers household solid waste shall provide the opportunity for the general public to recycle cans, bottles, paper and other material for which a market exists and brought to the landfill site:

(A) During the normal hours of operation;

(B) In facilities convenient to the public (i.e., near entrance to the gate).

(ii) Owners or operators may demonstrate alternative means to providing an opportunity to the general public to recycle household solid waste.

(g) Disposal of dangerous waste prohibited. Owners or operators of landfills shall not knowingly dispose, treat, store, or otherwise handle dangerous waste unless the requirements of the dangerous waste regulation, chapter 173-303 WAC are met.

(5) Limited purpose landfill standards.

(a) Limited purpose landfills shall meet the following requirements:

(i) The general facility standards of WAC 173-304-405;

(ii) The general closure and post-closure standards of WAC 173-304-407;

(iii) The performance standards of WAC 173-304-460(2);

(iv) The financial assurance standards of WAC 173-304-467 and 173-304-468; and

(v) The groundwater monitoring standards of WAC 173-304-490.

(b) In addition, limited purpose landfills must meet all other standards of WAC 173-304-130 and 173-304-460 unless the owner or operator applies for relief from each of these requirements as part of his permit application and includes evidence or reasons why the nature of the waste, the disposal site and other factors can protect the environment and the public health.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-460, filed 10/4/88. Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-460, filed 10/28/85.]

**WAC 173-304-461 Inert waste and demolition waste landfilling facility requirements.** (1) Applicability. These standards apply to facilities that landfill more than two thousand cubic yards of inert wastes and demolition wastes, as defined in WAC 173-304-100, including facilities that use inert waste and demolition waste as a component of fill. Inert wastes and demolition wastes used as road building materials are excluded from this section. These standards do not apply to asbestos containing waste regulated under the federal 40 C.F.R. Part 61 rules and the dangerous waste regulation, chapter 173-303 WAC.

(2) Inert wastes and demolition waste landfilling facilities shall not be subject to the Locational standards for disposal sites, WAC 173-304-130 except for WAC 173-304-130 (2)(f), slope.

(3) Owners or operators of inert waste and demolition waste landfill shall maintain a record of the weights or volumes and types of waste disposed of at each site.

(4) Owners or operators of inert wastes and demolition landfills shall employ measures to prevent emission of fugitive dusts, when weather conditions or climate indicate that transport of dust offsite is liable to create a nuisance. Preventative measures include watering of roads and covering.

(5) Timbers, wood and other combustible waste shall be covered as needed during the summer months to avoid a fire hazard.

(6) Owners or operators of inert wastes and demolition landfills shall close the facility by leveling the wastes to the extent practicable and shall fill any voids posing a physical hazard for persons after closure and to maintain an aesthetic appearance. A minimum of one foot of soil cover shall be used to close landfills.

(7) Owners or operators of inert waste and demolition waste landfills shall obtain a permit, as set forth in WAC 173-304-600 from the jurisdictional health department.

(8) Owners or operators of inert wastes and demolition landfills shall meet the requirements of WAC 173-304-405(7), recording with the county auditor.

(9) Owners or operators of inert waste or demolition waste landfills shall not accept any other form of waste except inert waste and demolition waste.

(10) Owners or operators of inert waste and demolition waste landfills shall prevent unauthorized disposal during off-hours by controlling entry (i.e., lockable gate or barrier) when the facility is not being used.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-461, filed 10/28/85.]

**WAC 173-304-462 Woodwaste landfilling facility requirements.**

(1) Applicability. These requirements apply to facilities that landfill more than two thousand cubic yards of woodwaste including facilities that use woodwaste as a component of fill. Woodwaste is defined in WAC 173-304-100. These standards are not applicable to woodwaste landfills on forest lands regulated under the Forest Practices Act, chapter 76.09 RCW.

(2) Minimum functional standards.

(a) Woodwaste landfills are not subject to WAC 173-304-130 standards, Locational standards for disposal sites, except for WAC 173-304-130 (2)(e) surface water locational standards and WAC 173-304-130 (2)(b)(iii) down gradient drinking water supply wells.

Woodwastes may be used as a component of fill within a shoreline and associated wetlands only if a demonstrated and proven technology to prevent ground and surface water contamination is used.

(b) Owners or operators of woodwaste landfills shall maintain a record of the weights or volumes of waste disposed of at each facility.

(c) Owners or operators of woodwaste landfills shall not accept any other wastes except woodwaste.

(d) Owners or operators of woodwaste landfills shall prevent runoff from a maximum twenty-five year storm.

(e) All wood waste landfills having a capacity of greater than ten thousand cubic yards at closure shall either:

(i) Have a groundwater monitoring system that complies with WAC 173-304-490 and the woodwaste landfill meet the performance standards of WAC 173-304-460(2); or

(ii) Have a leachate collection and treatment system.

(f) Owners or operators of woodwaste landfills shall not deposit woodwaste in lifts to a height of more than ten feet per lift with at least one foot of cover material between lifts to avoid hot spots and fires in the summer and to avoid excessive build-up of leachate in the winter, and shall compact woodwaste as necessary to prevent voids.

(g) Owners or operators of woodwaste landfills shall prevent unauthorized disposal during off-hours by controlling entry (i.e., lockable gate or barrier), when the facility is not being used.

(h) Owners or operators of woodwaste landfills shall close the facility by leveling and compacting the wastes and applying a compacted soil cover of at least two feet thickness.

(i) Owners or operators of woodwaste landfills shall obtain a permit as set forth in WAC 173-304-600 from the jurisdictional health department.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-462, filed 10/28/85.]

**WAC 173-304-463 Problem waste landfills. (Reserved.)**

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-463, filed 10/28/85.]

**WAC 173-304-467 Financial assurance for public facilities. (1) Applicability.**

(a) These standards apply to all new and expanded landfill disposal facilities, and to existing landfill disposal facilities that have not been closed on or before November 27, 1989. Landfill disposal facilities include:

(i) All solid waste facilities operated as landfills under WAC 173-304-460, including limited purpose landfills under WAC 173-304-460(5);

(ii) Facilities operated as surface impoundments under WAC 173-304-430 that are closed with the waste remaining in place and therefore required to meet the requirements of WAC 173-304-407; and

(iii) Woodwaste landfills operated under WAC 173-304-462;

(b) For the purposes of this section, landfill disposal facilities are divided into the following ownership/use categories:

(i) A privately owned facility that accepts waste from the general public;

(ii) A publicly owned facility that accepts waste from the general public.

(c) For the purposes of this section, publicly owned or operated facilities may set up one account for both closure and post-closure care of each facility.

(2) Cost estimate for closure.

(a) Each owner or operator shall prepare a written closure cost estimate as part of the facility closure plan. The closure cost estimate shall be in current dollars and represent the cost of closing the facility in accordance with the closure requirements in WAC 173-304-407.

(i) The cost estimate shall be based on a reasonable cost estimate for completing design, purchase, construction, and other activities as identified in the facility closure plan as required under WAC 173-304-407;

(ii) The closure plan shall project intervals for withdrawal of closure funds from the closure financial assurance instrument to complete the activities identified in the approved closure plan;

(iii) The closure cost estimate shall not be reduced by allowance for salvage value of equipment, waste, or the resale value of property or land;

(b) Each owner or operator shall prepare a new closure cost estimate in accordance with (a) and (c) of this subsection whenever:

(i) Changes in operating plans or facility design affect the closure plan;

(ii) There is a change in the expected year of closure that affects the closure plan; or

(iii) The jurisdictional health department directs the owner or operator to revise the closure plan or closure cost estimate.

(c) Each owner or operator shall review the closure cost estimate annually thirty days prior to the anniversary date of the first closure cost estimate. The review will examine all factors, including inflation, involved in estimating the closure cost. Any cost changes must be factored into a revised closure cost estimate and submit the revised cost estimate to the jurisdictional health department for review and approval.

(d) During the operating life of the facility, the owner or operator shall make the latest closure cost estimate prepared in accordance with (a) and (b) of this subsection, and when this estimate has been adjusted in accordance with (c) of this subsection, made available for review.

(3) Financial assurance account for closure. Each owner or operator of an applicable landfill disposal facility shall establish a financial assurance account in an amount that, over the life of the facility, will accumulate funds to be equal to the closure cost estimate prepared in accordance with subsection (2) of this section unless otherwise specified.

(a) Landfill disposal facilities that accept waste from the general public shall choose from the following options or combination of options for accounting for the financial assurance account:

(i) For landfill disposal facilities owned or operated by municipal corporations, the closure and post-closure reserve account shall be handled in one of the following ways:



(A) Cash and investments accumulated and restricted for closure with an equivalent amount of fund balance reserved in the fund accounting for solid waste activity; or

(B) The cash and investments held in a nonexpendable trust fund.

(C) Other approved method.

(ii) Closure trust fund established with an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency. The wording of the trust agreement must be acceptable to the local health department. The purpose of the closure trust fund is to receive and manage any funds paid by the owner or operator and to disburse those funds only for closure activities as identified in the approved closure plan.

(b) For private disposal facilities that accept public waste, established closure financial assurance accounts shall not constitute an asset of the facility owner or operator.

(c) During the operating life of the facility, the owner or operator must review the closure cost estimate thirty days before each anniversary of the date on which the first closure cost estimate was prepared. The review shall examine all factors, including inflation, involved in estimating the closure cost estimate. Any changes in costs shall be factored into a revised closure cost estimate. The new estimate shall be submitted to the jurisdictional health department for review and approval.

(d) For disposal facilities of this section, any income in excess of the closure cost estimate accruing to the established closure financial assurance account will be at the owner's discretion as to the use of said funds.

(e) Excess moneys remaining in the closure financial assurance account after the completion of all identified closure activities will be released to the facility owner or operator.

(4) Cost estimate for post-closure.

(a) Each owner or operator shall prepare a written post-closure cost estimate as part of the facility post-closure plan. The post-closure cost estimate shall be in current dollars and represent the total cost of completing post-closure activities for the facility for at least a twenty-year post-closure period in accordance with the post-closure requirements in WAC 173-304-407.

(i) The post-closure cost estimate shall be based on a reasonable cost estimate for completing post-closure monitoring, maintenance, and other activities identified in the approved facility post-closure plan as required under WAC 173-304-407;

(ii) The post-closure plan shall project annual or other intervals for withdrawal of post-closure funds from the post-closure financial assurance instrument to complete the activities identified in the approved post-closure plan;

(iii) The post-closure cost estimate shall not be reduced by allowance for salvage, value of equipment, waste, or resale value of property or land.

(b) Each owner or operator shall prepare a new post-closure cost estimate for the remainder of the post-closure care twenty-year period in accordance with (a) and (c) of this subsection, whenever:

(i) Change in the post-closure plan increases or decreases the cost of post-closure care; or

(ii) The jurisdictional health department directs the owner or operator to revise the post-closure plan or post-closure cost estimate.

(c) During the operating life of the facility, the owner or operator shall review the post-closure cost estimate thirty days prior to each anniversary of the date on which the first post-closure cost estimate was prepared. The review shall examine all factors, including inflation, involved in estimating the post-closure cost estimate. Any changes in costs must be factored into a revised post-closure cost estimate. The new estimate must be submitted to the jurisdictional health department for approval.

(d) During the operating life of the facility, the owner or operator shall keep the latest post-closure cost estimate prepared in accordance with (a) and (b) of this subsection, available for review.

(5) Financial assurance account for post-closure. Each owner or operator of a landfill disposal facility shall establish a financial assurance account in an amount equal to the post-closure cost estimate prepared in accordance with subsection (4) of this section.

(a) Applicable landfill disposal facilities that accept waste from the general public shall choose from the following options or combinations of options for accounting for the financial assurance account:

(i) For landfill disposal facilities owned or operated by municipal corporations, the post-closure reserve shall be handled in one of the following ways:

(A) Cash and investments accumulated and restricted for post-closure with an equivalent amount of fund balance reserved in the fund accounting for solid waste activity;

(B) Cash and investments held in a nonexpendable trust fund.

(C) Other approved method.

(ii) Post-closure trust fund established with an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency. The wording of the trust agreement must be acceptable to the department of ecology. The purpose of the post-closure trust fund is to receive and manage any funds paid by the owner or operator and to disburse those funds only for post-closure activities as identified in the approved post-closure plan.

(b) For disposal facilities as categorized in subsection (1)(b) of this section, established post-closure financial assurance accounts shall not constitute an asset of the facility owner or operator.

(c) For applicable disposal facilities of this section any income accruing to the established post-closure financial assurance account will be at the owner's discretion as to the use of said excess funds.

(d) Excess moneys remaining in the post-closure financial assurance account after the completion of all identified post-closure activities shall be released to the facility owner or operator.

(6) Closure/post-closure financial assurance account establishment and reporting.

(a) Closure and post-closure financial assurance funds shall be generated at each facility by transferring a percentage of the facility user fees to the selected financial assurance instrument at the schedule specified in the closure and post-closure plans, such that adequate closure and post-closure funds will be generated to ensure full implementation of the approved closure and post-closure plans.

(b) Each facility owner or operator must establish a procedure with the financial assurance instruments trustee for notification of nonpayment of funds to be sent to the jurisdictional health department and the department of ecology.

(c) Each owner or operator shall file with the department of ecology an annual audit of the financial assurance accounts established for closure and post-closure activities, and a statement of the percentage of user fees, as applicable, diverted to the financial assurance instruments.

(i) For landfill disposal facilities owned and operated by municipal corporations, the closure reserve account shall be audited according to the audit schedule of the office of state auditor and shall be filed with the department of ecology, including each of the post-closure care years.

(ii) For landfill disposal facilities not owned or operated by municipal corporations:

(A) Annual audits shall be conducted by a certified public accountant licensed in the state of Washington, and shall be filed with the department of ecology no later than March 31 of each year for the previous calendar year, including each of the post-closure care years.

(B) The audit shall also include calculations demonstrating the proportion of closure completed during the preceding year as specified in the closure and post-closure plans.

(d) Existing landfill disposal facilities may submit a written request with their annual audit to the department of ecology requesting a waiver from utilizing user fees to generate the moneys necessary for the closure and/or post-closure financial assurance account.

(i) The waiver request should provide documentation to demonstrate the facility user fees are prohibitively high, and include alternate method(s) for funding the facility's closure and/or post-closure financial assurance account;

(ii) The waiver request review procedure will be according to WAC 173-304-700.

(7) Authorization for financial assurance account fund withdrawal for closure and post-closure activities.

(a) Each owner or operator will withdraw funds from the closure and/or post-closure financial assurance instrument as specified in the approved closure/post-closure plans;

(b) If the withdrawal of funds from the financial assurance instrument exceeds by more than five percent the withdrawal schedule stated in the approved closure and/or post-closure plan, the closure and/or post-closure plan shall be amended.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-467, filed 10/4/88.]

**WAC 173-304-468 Financial assurance for private landfill disposal facilities.** (1) Applicability.

(a) For the purposes of this regulation private landfill disposal facilities are privately owned facilities that do not accept waste from the general public and dispose of only their own generated waste.

(b) These standards apply to all new and expanded landfill disposal facilities, and to existing landfill disposal facilities that have not been closed on or before November 27, 1989. Landfill disposal facilities include:

(i) Facilities operated as surface impoundments under WAC 173-304-430 that are closed with waste remaining in place and therefore required to meet the requirements of WAC 173-304-407; and

(ii) Woodwaste landfills operated under WAC 173-304-462.

(2) Cost estimates for closure and post-closure.

(a) Each owner or operator shall prepare separate written closure and post-closure cost estimates as part of the facility closure and post-closure plans. The cost estimates shall be in current dollars and represent the cost of closing or post-closure care of the facility for a period of twenty years in accordance with the closure requirements in WAC 173-304-407.

(i) The cost estimate shall be based on a reasonable cost estimate for completing design, purchase, construction, and other activities as identified in the facility closure or post-closure plan as required under WAC 173-304-407;

(ii) The closure and post-closure plans shall project intervals for withdrawal of funds from the closure or post-closure financial assurance instrument to complete the activities identified in the approved closure or post-closure plan;

(iii) The closure and post-closure cost estimate shall not be reduced by allowance for salvage value of equipment, waste, or the resale value of property or land.

(b) Each owner or operator shall prepare a new closure or post-closure cost estimate in accordance with (a) and (c) of this subsection whenever:

(i) Changes in operating plans or facility design affect the closure or post-closure plans;

(ii) There is a change in the expected year of closure that affects the closure plan; or

(iii) The jurisdictional health department directs the owner or operator to revise the closure or post-closure plan or closure or post-closure cost estimate.

(c) Each owner or operator shall review the closure and post-closure cost estimate thirty days prior to the anniversary date of the date on which the first closure and post-closure cost estimate was prepared. The review shall examine all factors, including inflation, involved in estimating the closure and post-closure cost. Any cost changes shall be factored into a revised closure or post-closure cost estimate and submit the revised cost estimate to the jurisdictional health department and the department of ecology.

(d) During the operating life of the facility, the owner or operator must keep the latest closure and post-closure cost estimate prepared in accordance with (a) and (b) of this subsection, and when this estimate has been adjusted in accordance with (c) of this subsection, available for review.

(e) The department of ecology will evaluate each cost estimate for completeness, and may accept, or require a revision of the cost estimate in accordance with its evaluation.

(3) Financial assurance mechanism for closure and post-closure. Each owner or operator of an applicable landfill disposal facility shall establish financial assurance mechanisms in an amount equal to the closure cost estimate and post-closure cost estimate prepared in accordance with subsection (2) of this section.

(a) Applicable landfill disposal facilities shall provide one or more of the following financial assurance instruments:

(i) Closure and post-closure trust funds established with an entity which has authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency. The wording of the trust agreement must be acceptable to the department of ecology. The purpose of the closure and post-closure trust funds is to receive and manage any funds paid by the owner or operator and to dis-

burse those funds only for closure or post-closure activities as identified in the approved closure and post-closure plan;

(ii) Surety bond guaranteeing payment into a closure and post-closure trust fund issued by a surety company listed as acceptable in Circular 570 of the United States Treasury Department or as hereafter amended. The wording of the surety bond(s) must be acceptable to the department. A standby closure and post-closure trust fund must also be established by the permittee. The purpose of the standby closure or post-closure trust fund is to receive any funds that may be paid by the operator or surety company. The bond must guarantee that the permittee will either fund the standby closure or post-closure trust in an amount equal to the penal sum of the bond before the site stops receiving waste. The surety shall become liable on the bond obligation if the permittee fails to perform as guaranteed by the bond. The surety may not cancel the bond until at least one hundred twenty days after the notice of cancellation has been received by both the permittee and the local health department. If the permittee has not provided alternate financial assurance acceptable under this section within ninety days of the cancellation notice, the surety must pay the amount of the bond into the standby closure or post-closure trust account;

(iii) Surety bond guaranteeing performance of closure or post-closure issued by a surety company listed as acceptable in Circular 570 of the United States Treasury Department or as hereafter amended. The wording of the surety bond must be acceptable to the department of ecology. A standby closure and post-closure trust fund must also be established by the permittee. The purpose of the standby closure or post-closure trust fund is to receive any funds that may be paid by the surety company. The bond must guarantee that the permittee will perform final closure or post-closure activities. The surety shall become liable on the bond obligation if the permittee fails to perform as guaranteed by the bond. The surety may not cancel the bond until at least one hundred twenty days after the notice of cancellation has been received by the permittee and the local health department. If the permittee has not provided alternative financial assurance acceptable under this section within ninety days of the cancellation notice, the surety must pay the amount of the bond into the standby closure or post-closure trust account;

(iv) Closure or post-closure irrevocable letter of credit issued by an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency. The wording of the letter of credit must be acceptable to the department. Standby closure and post-closure trust funds must also be established by the permittee. The purpose of the standby trust funds is to receive any funds deposited by the issuing institution resulting from a draw on the letter of credit. The letter of credit must be irrevocable and issued for a period of at least one year unless the issuing institution notifies both the permittee and the local health department at least one hundred twenty days before the current expiration date. If the permittee fails to perform closure and post-closure activities according to the closure or post-closure plan and permit requirements, or if the permittee fails to provide alternate financial assurance acceptable to the department within ninety days after notification that the letter of credit will not be extended, the local health department may draw from the letter of credit;

(v) Closure and post-closure insurance policies issued by an insurer who is licensed to transact the business of insurance or is eligible as an excess or surplus lines insurer in one or more states. The

working of the certificate of insurance must be acceptable to the department. Each insurance policy must guarantee that the funds will be available to complete those activities identified in the approved closure and post-closure plans. The policy must also guarantee that the insurer will be responsible for paying out funds for activities identified in either the closure or post-closure plan. The policy must provide that the insurance is automatically renewable and that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. If there is a failure to pay the premium, the insurer may not terminate the policy until at least one hundred twenty days after the notice of cancellation has been received by both the permittee and the local health department. Termination of the policy may not occur and the policy must remain in full force and effect if: The local health department determines the facility has been abandoned; or closure has been ordered by the local health department or a court of competent jurisdiction, or the permittee has been named as debtor in a voluntary or involuntary proceeding under Title 11 U.S.C. (Bankruptcy); or the premium due is paid. The permittee is required to maintain the policy in full force and until an alternative financial assurance guarantee is provided or when the permit is terminated.

(vi) Financial test and corporate guarantee for closure and post-closure. A private corporation meeting the financial test may provide a corporate guarantee that closure and post-closure activities will be completed according to the approved closure and post-closure plans and permit requirements. To qualify, a private corporation must meet the criteria of either (a) (vi) (A) or (B) of this subsection:

(A) Financial test. To pass the financial test the permit must have:

(I) Two of the following three ratios: A ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; or a ratio of current assets to current liabilities greater than 1.5;

(II) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates;

(III) Tangible net worth of at least ten million dollars; and

(IV) Assets in the United States amounting to at least ninety percent of its total assets or at least six times the sum of the current closure and post-closure cost estimates.

(B) Alternative financial test. To pass the alternative financial test, the permittee must have:

(I) A current rating of AAA, AA, A, or BBB as issued by *Standard and Poor's* or Aaa, Aa, A, or Bbb as issued by *Moody's*;

(II) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates;

(III) Tangible net worth of at least ten million dollars; and

(IV) Assets in the United States amounting to at least ninety percent of its total assets or at least six times the sum of the current closure and post-closure cost estimates.

(C) The permittee shall demonstrate that it passes the financial test at the time the closure plan is filed and reconfirm that annually ninety days after the end of the corporation's fiscal year by submitting the following items to the department of ecology:

(I) A letter signed by the permittee's chief financial officer that provides the information necessary to document that the permittee passes the financial test; that guarantees that the funds to finance

closure and post-closure activities according to the closure or post-closure plan and permit requirements are available; that guarantees that the closure and post-closure will be completed according to the closure or post-closure plan and permit requirements; that guarantees that within thirty days after written notification from the jurisdictional health department that the permittee no longer meets the criteria of the financial test the permittee shall provide an alternative form of financial assurance consistent with the requirements of this section; that guarantees that the permittee's chief financial officer will notify the jurisdictional health department within fifteen days any time that the permittee no longer meets the criteria of the financial test or is named as debtor in a voluntary or involuntary proceeding under Title 11 U.S.C. (Bankruptcy); and that acknowledges that the corporate guarantee is a binding obligation on the corporation and that the chief financial officer has the authority to bind the corporation to the guarantee;

(II) A copy of the independent certified public accountant's report on examination of the permittee's financial statements for the latest completed fiscal year;

(III) A special report from the permittee's independent certified public accountant (CPA) stating that the CPA has compared the data which the letter from the permittee's chief financial officer specifies as having been derived from the independently audited year end financial statements for the latest fiscal year with the amounts in such financial statement and that no matters came to the CPA's attention which caused the CPA to believe that the specified data should be adjusted;

(IV) The jurisdictional health department may, based on a reasonable belief that the permittee no longer meets the criteria of the financial test, require reports of the financial condition at any time from the permittee in addition to the annual report. If the jurisdictional health department finds, on the basis of such reports or other information that the permittee no longer meets the criteria of the financial test, the permittee shall provide an alternative form of financial assurance consistent with the requirements of this section, within thirty days after notification by the jurisdictional health department.

(b) For applicable disposal facilities of this section, any income in excess of the cost estimate(s) accruing to the established closure or post-closure financial assurance account will be at the owner's discretion as to the use of said surplus funds.

(c) A permittee may meet the requirements of this section by obtaining a written guarantee from the parent corporation of the permittee. The guarantor must meet one of the financial tests described in (a)(vi)(A) or (B) of this subsection, and must provide the documentation required by (a)(vi)(C) of this subsection. The terms of the guarantee must provide that:

(i) If the permittee fails to perform final closure and, where required, provide post-closure care of a facility covered by the guarantee in accordance with the approved closure and post-closure plans, the guarantor will do so or establish a trust fund as specified in (a)(i) of this subsection in the name of the permittee.

(ii) The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the permittee, to the jurisdictional health department and to the department of ecology. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by

both the permittee and the department of ecology, as evidenced by the return receipts.

(iii) If the permittee fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the jurisdictional health department or the department of ecology within ninety days after receipt by both the permittee, the jurisdictional health department, and the department of ecology of a notice of cancellation of the guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the permittee.

(4) Closure/post-closure trust fund account establishment and reporting.

(a) Each owner or operator shall file with the local health department an annual audit of the financial assurance accounts established for closure and post-closure activities.

(b) Annual audits shall be conducted by a certified public accountant licensed in the state of Washington, and shall be filed with the department of ecology no later than March 31 of each year for the previous calendar year, including each of the post-closure care years.

(c) The audit shall also include calculations demonstrating the proportion of closure completed during the preceding year as specified in the closure and post-closure plans.

(5) Authorization for financial assurance account fund withdrawal for closure and post-closure activities.

(a) Each owner or operator shall withdraw funds from the closure and/or post-closure financial assurance instrument as specified in the approved closure/post-closure plans;

(b) If the withdrawal of funds from the financial assurance instrument exceeds by more than five percent the withdrawal schedule stated in the approved closure and/or post-closure plan the closure and/or post-closure plan shall be amended.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-468, filed 10/4/88.]

**WAC 173-304-470 Other methods of solid waste handling.** (1) Applicability. This section applies to other methods of solid waste handling such as a material resource recovery system for municipal waste not specifically identified elsewhere in this regulation, nor excluded from this regulation.

(2) Requirements. Owners and operators of other methods of solid waste handling shall:

(a) Comply with the requirements in WAC 173-304-405;

(b) Obtain a permit under WAC 173-304-600 from the jurisdictional health department, by submitting an application containing information required in WAC 173-304-600 (3)(a), and such other information as may be required by the jurisdictional health department and the department, including:

(i) Preliminary engineering reports and plans and specifications; and

(ii) A closure plan.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-470, filed 10/28/85.]



**WAC 173-304-490 Groundwater monitoring requirements.** (1) Applicability. These requirements apply to owners and operators of landfills, piles, landspreading disposal facilities, and surface impoundments that are required to perform groundwater monitoring under WAC 173-304-400.

(2) Groundwater monitoring requirements.

(a) The groundwater monitoring system must consist of at least one background or upgradient well and three down gradient wells, installed at appropriate locations and depths to yield groundwater samples from the upper most aquifer and all hydraulically connected aquifers below the active portion of the facility.

(i) Represent the quality of background water that has not been affected by leakage from the active area; and

(ii) Represent the quality of groundwater passing the point of compliance. Additional wells may be required by the jurisdictional health department in complicated hydrogeological settings or to define the extent of contamination detected.

(b) All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must allow collection of representative groundwater samples. Wells must be constructed in such a manner as to prevent contamination of the samples, the sampled strata, and between aquifers and water bearing strata and in accordance with chapter 173-160 WAC, Minimum standards for construction and maintenance of water wells.

(c) The groundwater monitoring program must include at a minimum, procedures and techniques for:

(i) Decontamination of drilling and sampling equipment;

(ii) Sample collection;

(iii) Sample preservation and shipment;

(iv) Analytical procedures and quality assurance;

(v) Chain of custody control; and

(vi) Procedures to ensure employee health and safety during well installation and monitoring.

(d) Sample constituents.

(i) All facilities shall test for the following parameters:

(A) Temperature;

(B) Conductivity;

(C) pH;

(D) Chloride;

(E) Nitrate, nitrite, and ammonia as nitrogen;

(F) Sulfate;

(G) Dissolved iron;

(H) Dissolved zinc and manganese;

(I) Chemical oxygen demand;

(J) Total organic carbon; and

(K) Total coliform.

(ii) The jurisdictional health department in consultation with the department may specify additional or fewer constituents depending upon the nature of the waste; and

(iii) Test methods used to detect the parameters of (d)(i) of this subsection shall be EPA Publication Number SW-846, *Test Methods for Evaluating Solid Waste - Physical/Chemical Methods* except for total coliform which shall use the latest edition of *Standard Methods for the Examination of Water and Wastewater*.

(e) The groundwater monitoring program must include a determination of the groundwater surface elevation each time groundwater is sampled.

(f) The owner or operator shall use a statistical procedure for determining whether a significant change over background has occurred. The jurisdictional health department will approve such a procedure with the guidance of the department.

(g) The owner or operator must determine groundwater quality at each monitoring well at the compliance point at least quarterly during the life of an active area (including the closure period) and the post-closure care period. The owner or operator must express the groundwater quality at each monitoring well in a form necessary for the determination of statistically significant increases.

(h) The owner or operator must determine and report the groundwater flow rate and direction in the uppermost aquifer at least annually.

(i) If the owner or operator determines that there is a statistically significant increase for parameters or constituents at any monitoring well at the compliance point, the owner or operator must:

(i) Notify the jurisdictional health department of this finding in writing within seven days of receipt of the sampling data. The notification must indicate what parameters or constituents have shown statistically significant increases;

(ii) Immediately resample the groundwater in all monitoring wells and determine the concentration of all constituents listed in the definition of contamination in WAC 173-304-100 including additional constituents identified in the permit and whether there is a statistically significant increase such that the groundwater performance standard has been exceeded, and notify the jurisdictional health department within fourteen days of receipt of the sampling data.

(j) The jurisdictional health department may require corrective action programs including facility closure if the performance standard of WAC 173-304-460 (2)(a) is exceeded and, in addition, may revoke any permit and require reapplication under WAC 173-304-600.

(3) Corrective action program. An owner or operator required to establish a corrective action program under this section must, at a minimum with the approval of the jurisdictional health officer:

(a) Implement a corrective action program that reduces contamination and if possible prevents constituents from exceeding their respective concentration limits at the compliance point by removing the constituents, treating them in place, or other remedial measures;

(b) Begin corrective action according to a written schedule after the groundwater performance standard is exceeded;

(c) Terminate corrective action measures once the concentrations of constituents are reduced to levels below the limits under WAC 173-304-460 (2)(a).

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-490, filed 10/28/85.]

#### **WAC 173-304-600 Permit requirements for solid waste facilities.**

##### **(1) Applicability.**

(a) All facilities which are subject to the standards of WAC 173-304-130, 173-304-300, and 173-304-400 are required to obtain permits. Permits are not required for single family residences and single family farms dumping or depositing solid waste resulting from their own activities on to or under the surface of land owned or leased by them when such action does not create a nuisance, violate statutes, ordinances, or regulations, including this regulation.

(b) Permits are not required for corrective actions at solid waste handling facilities performed by the state and/or in conjunction with the United States Environmental Protection Agency to implement the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), or corrective actions taken by others to comply with a state and/or federal cleanup order provided that:

(i) The action results in an overall improvement of the environmental impact of the site;

(ii) The action does not require or result in additional waste being delivered to the site or increase the amount of waste or contamination present at the site;

(iii) The facility standards of WAC 173-304-400 are met; and

(iv) The jurisdictional health department is informed of the actions to be taken and is given the opportunity to review and comment upon the proposed corrective action plans.

(c) Effective dates. The effective dates are as follows:

(i) The permit requirements of this section apply to all existing waste handling facilities eighteen months after the effective date of this regulation.

(ii) Between the effective date of this regulation and eighteen months thereafter, existing facilities will operate under the terms and conditions of existing permits valid on the effective date of this regulation. Jurisdictional health departments shall incorporate compliance schedules into valid existing permits; such compliance schedules shall insure that existing facilities meet the effective dates of WAC 173-304-400(3).

(iii) New and expanded waste handling facilities shall meet the requirements of this section on the effective date of this regulation.

(2) Procedures for permits.

(a) Any owner or operator subject to the permit requirements who intends to operate a facility must apply for a permit with the jurisdictional health department. Filing shall not be complete until two copies of the application have been signed by the owner and operator and received by the jurisdictional health department, and the applicant has filed an environmental checklist required under the State Environmental Policy Act rules, chapter 197-11 WAC.

(b) Applications for a permit must contain the information set forth in subsection (3) of this section.

(c) Once the jurisdictional health department determines that an application for a permit is factually complete, it shall refer one copy to the appropriate regional office of the department for review and comment.

(d) The jurisdictional health department shall investigate every application to determine whether the facilities meet all applicable laws and regulations, conforms with the approved comprehensive solid waste handling plan and complies with all zoning requirements.

(e) The jurisdictional health department may establish reasonable fees for permits and renewal of permits. All permit fees collected by the health department shall be deposited in the county treasury in the account from which the health department's operating expenses are paid.

(f) The department shall report to the jurisdictional health department its findings on each permit application within forty-five days of receipt of a complete application or inform the jurisdictional health department as to the status of the application. Additionally, the department shall recommend for or against the issuance of each permit by the jurisdictional health department.

(g) When the jurisdictional health department has evaluated all pertinent information, it may issue a permit. Every completed solid waste permit application shall be approved or disapproved within ninety days after its receipt by the jurisdictional health department or the applicant shall be informed as to the status of the application.

(h) Except for applications specified in subsection (3)(h) of this section every permit issued by a jurisdictional health department shall be on a format prescribed by the department and shall contain specific requirements necessary for the proper operation of the permitted site or facility including the requirement that final engineering plans and specifications be submitted for approval to the jurisdictional health department.

(i) All issued permits must be filed with the department no more than seven days after the date of issuance.

(j) The owner or operator of a facility shall apply for renewal of the facility's permit annually. The jurisdictional health department shall annually:

(i) Review the original application for compliance with these regulations and submit such additional information as spelled out in subsection (4) of this section;

(ii) Review information collected from inspections, complaints, or known changes in the operations;

(iii) Collect the renewal fee;

(iv) Renew the permit; and

(v) File the renewed permit with the department no more than seven days after the date of issuance. The department shall review and may appeal the renewal as set forth in RCW 70.95.185 and 70.95.190.

(3) Application contents for permits for new or expanded facilities.

(a) All permit applications except for inert waste, demolition waste, special purpose landfills, woodwaste landfill and recycling facilities applications, which are specified in (h) of this subsection, shall contain the following:

(i) A general description of the facility;

(ii) The types of waste to be handled at the facility;

(iii) The plan of operation required by WAC 173-304-405(2);

(iv) The form used to record weights or volumes required by WAC 173-304-405(3);

(v) An inspection schedule and inspection log required by WAC 173-304-405(5); and

(vi) Documentation to show that any domestic or industrial waste water treatment facility, such as a leachate treatment system, is being reviewed by the department under chapter 173-240 WAC.

(b) Application contents for permits for new or expanded landfill facilities. In addition to the requirements of (a) of this subsection, each landfill application for a permit must contain:

(i) A geohydrological assessment of the facility that addresses:

(A) Local/regional geology and hydrology, including faults, unstable slopes and subsidence areas on site;

(B) Evaluation of bedrock and soil types and properties;

(C) Depths to groundwater and/or aquifer(s);

(D) Direction and flow rate of local groundwater;

(E) Direction of regional groundwater;

(F) Quantity, location and construction (where available) of private and public wells within a two thousand foot radius of site;

(G) Tabulation of all water rights for groundwater and surface water within a two thousand foot radius of the site;

- (H) Identification and description of all surface waters within a one-mile radius of the site;
- (I) Background ground and surface water quality assessment, and for expanded facilities, identification of impacts of existing facilities of the applicant to date upon ground and surface waters from landfill leachate discharges;
- (J) Calculation of a site water balance;
- (K) Conceptual design of a groundwater and surface water monitoring system, including proposed installation methods for these devices and where applicable a vadose zone monitoring plan;
- (L) Land use in the area, including nearby residences; and
- (M) Topography of the site and drainage patterns.
- (ii) Preliminary engineering report/plans and specifications that address:
  - (A) How the facility will meet the locational standards of WAC 173-304-130;
  - (B) Relationship of facility to county solid waste comprehensive plan and the basis for calculating the facility's life;
  - (C) The design of bottom and side liners;
  - (D) Identification of borrow sources for daily and final cover, and soil liners;
  - (E) Interim/final leachate collection, treatment, and disposal;
  - (F) Landfill gas control and monitoring;
  - (G) Trench design, fill methods, elevation of final cover and bottom liner, and equipment requirements; and
  - (H) Closure/post-closure design, construction, maintenance, and land use.
- (iii) An operation plan that addresses:
  - (A) Operation and maintenance of leachate collection, treatment, and disposal systems;
  - (B) Operation and maintenance of landfill gas control systems;
  - (C) Monitoring plans for groundwater, surface water, and landfill gases to include sampling technique, frequency, handling, and analyses requirements;
  - (D) Safety and emergency accident/fire plans;
  - (E) Routine filling, grading, cover, and housekeeping;
  - (F) Record system to address records on weights (or volumes), number of vehicles and the types of waste received;
  - (G) Vector control plans; and
  - (H) Noise control.
- (iv) Closure plan to address:
  - (A) Estimate of closure season/year;
  - (B) Capacity of site in volume and tonnage;
  - (C) Maintenance of active fill versus completed, final covered acreage;
  - (D) Estimated closure construction timing and notification procedures;
  - (E) Inspection by regulatory agencies.
- (v) Post-closure plan to address:
  - (A) Estimated time period for post-closure activities;
  - (B) Site monitoring of landfill gas, groundwater, and surface water;
  - (C) Deed clause changes, land use, and zoning restrictions;
  - (D) Maintenance activities to maintain cover and runoff systems; and
  - (E) Identification of final closure costs including cost calculations and the funding mechanism.

(c) Application contents for new or expanded transfer stations, drop box facilities, and baling and compaction systems requiring a permit. In addition to the requirements of (a) of this subsection, each applicable application for a permit must contain preliminary engineering report/plans and specifications that address:

(i) The proposed facility's zoning status;

(ii) The relationship to the county solid waste comprehensive plan and the area to be served by the facility; and

(iii) The facility design to address how the facility shall meet requirements of WAC 173-304-410, including closure.

(d) Application contents for new or expanded surface impoundments requiring a permit. In addition to the requirements of (a) of this subsection, each applicable application for a permit must contain:

(i) A geohydrological assessment of the facility that addresses all of the factors of (b)(i) of this subsection;

(ii) Preliminary engineering report/plans and specifications that address, where applicable:

(A) How the proposed facility will meet the locational standards of WAC 173-304-130;

(B) The relationship of facility to the county solid waste comprehensive plan;

(C) The design of liners and foundation to be incorporated in the facilities design including the design leachate of collection and treatment systems;

(D) The design of groundwater monitoring;

(E) The design of dikes including calculations on dike stability analyses under conditions of liner failure;

(F) Other design details, including sludge cleanout and disposal, overfilling alarms and inlet design; and

(G) Closure/post-closure design, construction maintenance and land use.

(iii) An operation plan that addresses:

(A) Operation and maintenance of leachate collection system, or groundwater monitoring;

(B) Operation and maintenance of overfilling equipment or details of filling and emptying techniques;

(C) Inspection of dikes and liners for integrity; and

(D) Safety and emergency plans.

(iv) A closure plan to address:

(A) Estimate of closure year and cost;

(B) Methods of removing wastes, liners and any contaminated soils, and location of final disposal;

(C) Closure timing and notification procedures; and

(D) Final inspection by regulatory agencies.

(e) Application contents for new or expanded piles requiring a permit. In addition to the requirements of (a) of this subsection, each application for a permit must contain:

(i) Preliminary engineering reports/plans and specifications that address:

(A) How the proposed facility will meet the locational standards of WAC 173-304-130;

(B) The relationship of the facility to the county solid waste comprehensive plan and zoning;

(C) The design of the liner or sealed surface upon which the liner rests, including an analysis of the liners ability to withstand the stress;

(D) The design of the run-on and runoff system;

- (E) The design to avoid washout when the pile is located in a one hundred-year flood plain; and
- (F) Maximum elevation and boundaries of the waste pile.
- (ii) An operation plan that addresses:
  - (A) Methods of adding or removing wastes from the pile and equipment used;
  - (B) Inspection of the liner for integrity; and
  - (C) Safety and emergency plans.
- (iii) A closure plan to address:
  - (A) Estimate of closure year and cost;
  - (B) Methods of removing wastes, liners and any contaminated soils, and location of final disposal;
  - (C) Closure timing and notification procedures; and
  - (D) Final inspection by regulatory agencies.
- (f) Application contents for new or expanded energy recovery and incinerator facilities requiring a permit. In addition to the requirements of (a) of this subsection, each application for a permit must contain:
  - (i) Preliminary engineering reports/plans and specifications that address:
    - (A) The relationship of the facility to the county solid waste comprehensive plan and zoning;
    - (B) The design of the storage and handling facilities on-site for incoming waste as well as fly ash, bottom ash and any other wastes produced by air or water pollution controls; and
    - (C) The design of the incinerator or thermal treater, including changing or feeding systems, combustion air systems, combustion or reaction chambers, including heat recovery systems, ash handling systems, and air pollution and water pollution control systems. Instrumentation and monitoring systems design shall also be included.
  - (ii) An operation plan that addresses:
    - (A) Cleaning of storage areas as required by WAC 173-304-440 (2) (a);
    - (B) Alternative storage plans for breakdowns as required in WAC 173-304-440 (2) (c);
    - (C) Inspection to insure compliance with state and local air pollution laws and to comply with WAC 173-304-405(5). The inspection log or summary must be submitted with the application; and
    - (D) How and where the fly ash, bottom ash and other solid wastes will be disposed of.
  - (iii) A closure plan to address:
    - (A) Estimate of closure year and cost;
    - (B) Methods of closure and methods of removing wastes, equipment, and location of final disposal;
    - (C) Closure timing and notification procedures; and
    - (D) Final inspection by regulatory agencies.
  - (g) Application contents for new or expanded landspreading disposal facilities requiring a permit. In addition to the requirements of (a) of this subsection, each application for a permit must contain:
    - (i) A geohydrological assessment of the facility that addresses all of the factors of (b) (i) of this subsection;
    - (ii) Preliminary engineering reports/plans and specifications that address:
      - (A) How the proposed facility will meet the locational standards of WAC 173-304-130;
      - (B) The relationship of the facility to the county solid waste comprehensive plan and the basis for calculating the facility's life;

(C) Waste analyses and methods to periodically sample and analyze solid waste;

(D) Design of interim waste storage facilities if such facilities are not otherwise permitted by the department;

(E) Design of run-on and runoff systems;

(F) A contour map of the active area showing contours to the nearest foot;

(G) A groundwater and surface water monitoring program; and

(H) Access barriers such as fences, and warning signs.

(iii) An operation plan that addresses:

(A) Operation and maintenance of runoff and run-on systems;

(B) Methods of taking groundwater samples and for maintaining groundwater monitoring systems;

(C) Methods of applying wastes to meet the requirements of WAC 173-304-450 (2) (d):

(I) Estimated multiples of agronomic rates;

(II) Frequency of discing; and

(III) Avoidance of standing water.

(D) The written contract required between landowners, waste generators and waste operators.

(iv) Closure plan to address:

(A) Estimate of closure season/year;

(B) Capacity of site in volume and tonnage;

(C) Year-to-year maintenance of the active area versus completed, final covered acreage;

(D) Closure construction timing and notification procedures; and

(E) Final inspection by regulatory agencies.

(v) Post-closure plan to address:

(A) Estimated time period for post-closure activities;

(B) Site monitoring of groundwater;

(C) Deed clause changes, land use, and zoning restrictions;

(D) Maintenance activities to maintain cover and runoff systems;

(E) Plans for food chain crops being grown on the active areas, after closure; and

(F) Identification of final closure costs including cost calculations and the funding mechanism.

(h) Application contents for new or expanded inert waste and demolition waste, special purpose landfill, woodwaste landfills, and recycling facilities.

Applications for permits subject to the standards of WAC 173-304-300, 173-304-460(5), 173-304-461, and 173-304-462 shall be on forms whose content shall be specified by the jurisdictional health department.

(4) Application contents for existing facilities renewing permits. All owners or operators of existing facilities shall renew permits or application forms specified in subsection (3) of this section. Previous information submitted to the jurisdictional health department may be referred to on the application forms. Changes in operating methods or other changes must be noted on the application in order to be authorized by permit.

(5) Inspections. As a minimum, annual inspections of all permitted solid waste facilities shall be performed by the jurisdictional health department. Any duly authorized officer, employee, or representative of the jurisdictional health officer or his designee having jurisdiction may enter and inspect any property, premises or place at any reasonable time for the purpose of determining compliance with this chapter, and relevant laws and regulations. Findings shall be no-



ted and kept on file. A copy of the inspection report or annual summary shall be furnished to the site operator.

[Statutory Authority: RCW 70.95.215. WSR 88-20-066 (Order 88-28), § 173-304-600, filed 10/4/88. Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-600, filed 10/28/85.]

**WAC 173-304-700 Variances.** (1) Any person who owns or operates a solid waste facility may apply to the jurisdictional health officer for a variance from any section of this regulation. The application shall be accompanied by such information as the jurisdictional health department may require. The jurisdictional health department may grant such variance, but only after due notice or a public hearing if requested, if it finds that:

(a) The solid waste handling practices or location do not endanger public health, safety or the environment; and

(b) Compliance with the regulation from which variance is sought would produce hardship without equal or greater benefits to the public.

(2) No variance shall be granted pursuant to this section until the jurisdictional health department has considered the relative interests of the applicant, other owners of property likely to be affected by the handling practices and the general public.

(3) Any variance or renewal shall be granted within the requirements of subsection (1) of this section and for time period and conditions consistent with the reasons therefor, and within the following limitations:

(a) If the variance is granted on the ground that there is no practicable means known or available for the adequate prevention, abatement, or control of pollution involved, it shall be only until the necessary means for prevention, abatement or control become known and available and subject to the taking of any substitute or alternative measures that the jurisdictional health department may prescribe;

(b) The jurisdictional health department may grant a variance conditioned by a time table if:

(i) Compliance with the regulation will require spreading of costs over a considerable time period; and

(ii) The time table is for a period that is needed to comply with the regulation.

(4) Any variance granted pursuant to this section may be renewed on terms and conditions and for periods which would be appropriate on initial granting of a variance. No renewal thereof shall be granted, unless following a public hearing on the complaint or due notice, the jurisdictional health department finds the renewal is justified. No renewal shall be granted except on application. Any such application shall be made at least sixty days prior to the expiration of the variance. Immediately upon receipt of an application for renewal, the jurisdictional health department shall give public notice of such application in accordance with rules and regulations of the jurisdictional health department.

(5) An application for a variance, or for the renewal thereof, submitted to the jurisdictional health department shall be approved or disapproved by the jurisdictional health department within ninety days of receipt unless the applicant and the jurisdictional health department agree to a continuance.

(6) No variance shall be granted by a jurisdictional health department except with the approval and written concurrence of the department prior to action on the variance by the jurisdictional health department.

(7) Variances granted by a jurisdictional health department will be accepted as variances under this regulation.

(8) Public notice shall be given by mailing a notice of the variance application to persons who have written to the jurisdictional health department asking to be notified of all variance requests.

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-700, filed 10/28/85.]

**WAC 173-304-9901 Maximum contaminant levels for groundwater.**

Maximum contaminant levels for groundwater shall be those specified in chapter 248-54 WAC, as the primary drinking water standards. Analytical methods for these contaminants may be found in the Code of Federal Regulations 40 C.F.R. Part 141. (These contaminant levels are to be considered interim levels for the purpose of regulating solid waste handling facilities and shall be used until such time as the department establishes groundwater quality standards for all types of activities impacting groundwater.)

[Statutory Authority: Chapter 43.21A RCW. WSR 85-22-013 (Order 85-18), § 173-304-9901, filed 10/28/85.]