



ANAEROBIC DIGESTER
Checklist for Review of Solid Waste Permit Application
per WAC 173-350-250
See WAC 173.350.250 Table 250-A for Anaerobic Digester
Permit Exemptions

Name of Applicant:		
Name of Facility:		
Permit # assigned by Health Department:		
Phone:		
Date Received:		
Determination of Compliance with The Site or Facility:		
Meets all solid waste, air and other applicable laws and regulations		
Conforms with approved comprehensive solid waste handling plan		
Complies with zoning requirements (JHD only)		
Lead Agency Reviewer Name:		
Signature:		

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Location standards WAC 173-350-250(3)	Page/section location	Complete	Meets Requirements 175-350-040(5)	Date & Initials of Reviewer
There are no specific location standards for anaerobic digesters subject to this chapter; however, anaerobic digesters must meet the requirements provided under WAC 173-350-040(5).				
Agency Comments:				
Design Standards (permit requirements) WAC 173-350-250(4)	Page/section location	Complete	Meets Requirements	Date & Initials of Reviewer
Anaerobic digesters/facilities must be designed to meet the requirements listed in WAC 173-350-040.				
(a) Washington licensed engineer must prepare engineering reports, plans, specifications and construction quality assurance plan for the JHD and must include:				
(i) Engineering report with design basis and calculations for engineered features of facility including but not limited to pads, impoundments, leachate management features (if applicable), digestate management features, storm water management features, and anaerobic digester features. Engineering report must demonstrate that the proposed design will meet performance standards of this chapter;				
(ii) Scale drawings of the facility including the location and size of feedstock storage areas, fixed equipment, buildings, leachate management features (if applicable) , digestate management features, storm water management features, access road and other constructed areas, and buildings integral to facility operation;				
(iii) Design specifications for engineered features of facility including but not limited to pads, storm water management features, leachate management features (if applicable), digestate management features, and an anaerobic digester design that shows all structures, containers, tanks, and/or surface impoundments meet all requirements of this section, as well as federal, state, and local water and air permits; and				
(iv) Construction quality assurance plan describing monitoring, testing, documentation procedures performed during facility construction in accordance with approved design.				
(b) Public access all-weather roads designed to prevent traffic congestion, traffic hazards, dust and noise pollution.				
(c) Design waste receiving areas, digesters, digestate management features, storm water, and leachate management features (if applicable) to prevent contamination of soil, water, and air.				
(i) Feedstock, leachate (if applicable), and digestate receiving and storage areas in tanks OR surface impoundments OR on pads to prevent contamination of air, water, soil;				
(ii) All pads meet the following requirements:				
(A) All pads must be curbed or graded to prevent ponding, control run-on and runoff, and separately collect and convey all storm water and leachate to separate storage or holding facilities. Storm water combined with leachate must be treated as leachate;				
(B) All pads constructed on subgrades that support the weight of the pad, the materials placed on them, and equipment;				
(C) Entire surface area of pad designed to maintain structural and hydraulic integrity against feedstock, digestate, machinery loads and handling procedures;				
(D) Pad may be constructed of concrete (with sealed joints) OR asphaltic concrete; and				
(E) JHD may approve alternative pad design and construction material if engineering report shows alternatives provide sufficient environmental protection.				
(iii) Anaerobic digester design must comply with ONE of the following three conditions:				
(A) National Resources Conservation Service's Washington Conservations Practice Standard, Anaerobic Digester Code 366 (2010 or most current); OR				
(B) Surface Impoundment and tank design standards, WAC 173-350-330(3); OR				

(C) Other engineered design that complies with 173-350-040 to the satisfaction of the JHD and the department. Written consent from the JHD and the department is required.				
(iv) Storm water management features must divert storm water from feedstock receiving and storage areas and from digestate collection and storage areas. Features may include, but are not limited to, run-on prevention, berms, swales, ditches;				
(v) Leachate management features may include, but are not limited to, runoff prevention systems, leachate collection, conveyance, storage structures, and treatment systems;				
(vi) Any leachate generated must be contained or collected; any discharges require permit(s);				
(vii) Leachate ponds or tanks or digestate liquid storage in ponds or tanks must meet ONE of the following conditions:				
(A) Ponds must meet Natural Resources Conservation Service Standard in 2001 Washington Field Office Technical Guide 313 (rev 2011); OR				
(B) Pond liner consists of a minimum 30-mil thickness geomembrane on a subgrade that supports the liner and the contents of the pond, <u>or</u> a high density polyethylene geomembrane at least 60-mil thick to allow for proper welding ; and				
(I) Dikes and slopes designed to maintain structural integrity if liner leaks and able to withstand erosion from wave action, overfilling or precipitation; and				
(II) Freeboard \geq eighteen inches. JHD may reduce freeboard requirement if other engineering controls are in place; these engineering controls must be specified during the permitting process; OR				
(C) JHD approved (in permitting phase) alternative liner design demonstrated to prevent migration of solid waste or leachate into area waters; OR				
(D) Tanks used to store leachate or digestate liquid must meet design standards in WAC 173-350-330(3)(b).				
(viii) Leachate ponds and digestate liquid storage with potential to impound more than 10 acre feet (3,259,000 gallons) of liquid must be reviewed and approved by Ecology's dam safety section.				
Agency Comments:				
Operating Standards (permit requirements) WAC 173-350-250(5) (also see (f) for plan of operations)	Page/section location	Complete	Meets Requirements	Date & Initials of Reviewer
(a) Operate the facility to:				
(i) Control dust and odors from migrating off-site; (see (f)(ix) plan of operation)				
(ii) Prevent attraction of vectors;				
(iii) Prevent migration of agricultural pests;				
(iv) Confine organic materials prior to and after processing to specifically designated areas;				
(v) Ensure that dangerous waste is not accepted, treated or stored;				
(vi) Ensure the facility operates under supervision and control of properly trained individual(s) during all hours of operation; (see also (f)(vi) plan of operation)				
(vii) Ensure that facility employees are trained in facility operations, maintenance, safety, and emergency procedures; and (see also (f)(vi) plan of operation)				
(viii) Show that access to facility is restricted when facility is closed.				
(b) Identify a facility inspection schedule; (see (f)(vi) plan of operation)				
(c) Maintain operating records for:				
(i) Process monitoring data;				
(ii) Quantity in gallons or cubic yards and types of feedstocks received;				
(iii) Results of analysis for digestate that is sold or distributed; (see 5(c) and (f)(iv))				
(iv) Facility inspection reports.				
(d) Provide an annual report.				
(e) Properly manage digestate off-site (see also (f)(iv) plan of operation)				

(i) Test digestate on schedule (every 5000 cy or as approved by JHD);				
(ii) Ensure digestate meets conditions for commercial fertilizer (15.54 RCW); OR NA <input type="checkbox"/>				
(iii) Send digestate to permitted compost facility; OR NA <input type="checkbox"/>				
(iv) Land apply digestate in accordance with 173-350-230, Land Application; OR NA <input type="checkbox"/>				
(v) Use digestate in accordance with WAC 173-350-200, Beneficial Use Permit Exemption; OR NA <input type="checkbox"/>				
(vi) Apply digestate on agricultural lands in accordance with a nutrient management plan; OR NA <input type="checkbox"/>				
(vii) Manage digestate in an alternate manner approved by the JHD and Dept of Ecology.				
(f) Plan of Operation: submitted with the permit application will include:				
(i) Description of types of feedstocks accepted at the facility (feedstocks must be approved by the Ecology or the JHD);				
(ii) Procedure for ensuring only approved feedstocks are accepted is described;				
(iii) Description of how unacceptable wastes are handled;				
(iv) If digestate distributed off-site, describe plan to process digestate to meet requirements in (e) of this subsection NA <input type="checkbox"/>				
(v) If using digestate on-site, a nutrient management plan for agricultural lands and farm lands; NA <input type="checkbox"/>				
(vi) A description of how facility staff will be appropriately trained;				
(vii) Calculation of monthly capacity based on monthly volume (cubic yards or gallons) of material on-site at any one time. All material on-site include feedstocks, digesting materials and digestate;				
(viii) Material flow plan describing general procedures to manage all materials on- site (includes incoming feedstock, digestate materials, and digestate);				
(ix) Odor management plan including, but not limited to:				
(A) Methods for treating emissions to reduce odors;				
(B) Community relations plan to address odor issues should they arise; and				
(C) Description of facility and operational improvements that could be made if nuisance odors are identified beyond facility borders – which must address feedstock receiving, processing and digestate storage areas of facility.				
(x) Description of how equipment, structures, and other systems will be inspected and maintained including inspection schedule and log. Description must also include:				
(A) The groundwater monitoring system, if required;				
(B) Overfilling prevention equipment, including details of filling and emptying techniques;				
(C) Liners of surface impoundments and tanks, tank piping, and secondary containment as applicable.				
(xi) Safety, fire, and emergency plans including spill prevention/response;				
(xii) The forms used to record volumes (in cubic yards or gallons) of accepted feedstocks; and				
(xiii) Other such details demonstrating that the facility is operated in accordance with this chapter and as required by the JHD.				
Agency Comments:				
Ground Water Monitoring Requirements WAC 173-350-250(6)	Page/section location	Complete	Meets Requirements 173-350-040(5)	Date & Initials of Reviewer
There are no specific ground water monitoring requirements for anaerobic digesters subject to this chapter; however, anaerobic digesters must meet the requirements provided under WAC 173-350-040(5).				
Agency Comments:				

Closure Requirements WAC 173-350-250(7)	Page/section location	Complete	Meets Requirements	Date & Initials of Reviewer
(a) Develop, keep and follow closure plan approved by the JHD as part of the permitting process. At a minimum, closure plan must include removing all organic materials, including digestate, from the facility;				
(b) Notify JHD sixty days in advance of closure.				
Agency Comments:				
Financial Assurance Requirements WAC 173-350-250(8)	Page/section location	Complete	Meets Requirements 173-350- 040(5)	Date & Initials of Reviewer
There are no specific financial assurance requirements for anaerobic digesters subject to this chapter; however, anaerobic digesters must meet the requirements provided under WAC 173-350-040(5)				
Agency Comments:				
WAC 173-350-250(9) Permit Application Contents	Page/section location	Complete	Meets Requirements	Date & Initials of Reviewer
Owner or operator of and anaerobic digestion facility not exempt under subsection (2) of this section must obtain a permit from the JHD and all applications must be in accordance with WAC 173-350-710, WAC 173-350-715 and must contain:				
(a) Subsection (4) is complete and complies with the requirements of this rule;				
(b) Subsection (5) is complete and complies with the requirements of this section;				
(c) Subsection (7) is complete and complies with the requirements of this section.				
WAC 173-350-250(10) Construction Records	Page/section location	Complete	Meets Requirements	Date & Initials of Reviewer
Facilities must not start operation until the JHD has determined that the construction was completed in accordance with the approved engineering report, plans and specifications and has approved the construction documentation in writing and issued a permit. Within thirty days of completing construction, the owner or operator must provide the following materials to the JHD and Ecology:				
(a) Copies of construction record drawings for engineered facilities at the site;				
(b) A report documenting facility construction, including results of observations and testing carried out as part of the construction quality assurance plan.				