

CHAPTER 173-180A WAC
FACILITY OIL–HANDLING OPERATIONS AND DESIGN STANDARDS

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WAC

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WAC 173–180A–010 Purpose. The purpose of this rule is to establish facility operations and design standards which, when followed, will:

- (1) Prevent oil and petroleum spills from occurring;
- (2) Ensure that facilities are designed and operated in a manner which will provide the best achievable protection of the public health and the environment;
- (3) Provide improved protection of Washington waters and natural resources from the impacts of oil spills caused by improper oil-handling equipment design and operations.

[Statutory Authority: RCW 90.56.220. 94–10–084, § 173–180A–010, filed 5/4/94, effective 6/4/94.]

WAC 173–180A–020 Authority. RCW 90.56.220 provides statutory authority for developing operations and design standards and implementing a compliance program established by this chapter.

[Statutory Authority: RCW 90.56.220. 94–10–084, § 173–180A–020, filed 5/4/94, effective 6/4/94.]

WAC 173–180A–030 Definitions.

“**Appropriate person**” means a person designated by the facility as being competent and trained to implement a designated function.

“**Best achievable protection**” means the highest level of protection that can be achieved through the use of the best achievable technology and those staffing levels, training procedures, and operational methods that provide the greatest degree of protection available. The director’s

determination of best achievable protection shall be guided by the critical need to protect the state's natural resources and waters, while considering: The additional protection provided by the measures; the technological achievability of the measures; and the cost of the measures.

“Best achievable technology” means the technology that provides the greatest degree of protection taking into consideration: Processes that are being developed, or could feasibly be developed, given overall reasonable expenditures on research and development; and processes that are currently in use. In determining what is best achievable technology, the director shall consider the effectiveness, engineering feasibility, and commercial availability of the technology.

“Board” means the pollution control hearings board.

“Bulk” means material that is stored or transported in a loose, unpackaged liquid, powder, or granular form capable of being conveyed by a pipe, bucket, chute, or belt system.

“Cargo vessel” means a self-propelled ship in commerce, other than a tank vessel or a passenger vessel, greater than three hundred or more gross tons, including but not limited to, commercial fish processing vessels and freighters.

“Covered vessel” means a tank vessel, cargo vessel, or passenger vessel.

“Department” means the department of ecology.

“Directly impact” means without treatment.

“Director” means the director of the department of ecology.

“Discharge” means any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

“Emergency shutdown” means a deliberate stoppage of equipment or facility operation under circumstances requiring immediate action to prevent or reduce loss of life, injury, oil spills or significant damage to or loss of property or environmental values.

Facility:

“Facility” means any structure, group of structures, equipment, pipeline, or device, other than a vessel, located on or near the navigable waters of the state that transfers oil in the bulk to or from a tank vessel or pipeline, that is used for producing, storing, handling, transferring, processing, or transporting oil in bulk.

A facility does not include any: Railroad car, motor vehicle, or other rolling stock while transporting oil over the highways or rail lines of this state; underground storage tank regulated by the department or a local government under chapter 90.76 RCW; a motor vehicle motor fuel outlet; a facility that is operated as part of an exempt agricultural activity as provided in RCW 82.04.330; or a marine fuel outlet that does not dispense more than three thousand gallons of fuel to a ship that is not a covered vessel, in a single transaction.

“Facility person in charge” means the person designated under the provisions of 33 CFR 154.710.

“Navigable waters of the state” means those waters of the state, and their adjoining shorelines, that are subject to the ebb and flow of the tide and/or are presently used, have been used in the past, or may be susceptible for use to transport intrastate, interstate, or foreign commerce.

“Immediate threat” means threat which could cause loss of life, reduce safety or adversely impact waters of the state or environment.

“Oil” or “oils” means naturally occurring liquid hydrocarbons at atmospheric temperature and

pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum, gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under section 101(14) of the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by P.L. 99-499.

“**Offshore facility**” means any facility, as defined in this section, located in, on, or under any of the navigable waters of the state, but does not include a facility any part of which is located in, on, or under any land of the state, other than submerged land.

“**Onshore facility**” means any facility, as defined in this section, any part of which is located in, on, or under any land of the state, other than submerged land, that because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters of the state or the adjoining shorelines.

Owner or operator:

“**Owner or operator**” means: In the case of a vessel, any person owning, operating, or chartering by demise, the vessel; in the case of an onshore or offshore facility, any person owning or operating the facility; and in the case of an abandoned vessel or onshore or offshore facility, the person who owned or operated the vessel or facility immediately before its abandonment.

“**Operator**” does not include any person who owns the land underlying a facility if the person is not involved in the operations of the facility.

“**Person**” means any political subdivision, government agency, municipality, industry, public or private corporation, copartnership, association, firm, individual, or any other entity whatsoever.

“**Pipeline operator**” means the operator of a transmission pipeline.

“**Process pipelines**” means a pipeline used to carry oil within the oil refining/processing units of a facility, process unit to tankage piping and tankage interconnecting piping. Process pipelines do not include pipelines used to transport oil to or from a tank vessel or transmission pipeline.

“**Secondary containment**” means containment systems which prevent any materials discharged from reaching the waters of the state.

“**Ship**” means any boat, ship, vessel, barge, or other floating craft of any kind.

“**Spill**” means an unauthorized discharge of oil which enters waters of the state.

“**State**” means the state of Washington.

“**Storage tank**” means all aboveground containers connected to transfer pipelines or any aboveground containers greater than ten thousand gallons (two hundred thirty-eight barrels), including storage and surge tanks, used to store bulk quantities of oil. Storage tanks do not include those tanks regulated by chapter 90.76 RCW, rolling stock, wastewater treatment equipment, process pressurized vessels or other tanks used in the process flow through portions of the facility.

“**Tankage interconnecting piping**” means buried or aboveground piping used to carry oil between storage tanks.

“**Tank vessel**” means a ship that is constructed or adapted to carry, or that carries, oil in bulk as

cargo or cargo residue, and that:

Operates on the waters of the state; or

Transfers oil in a port or place subject to the jurisdiction of this state.

“**Transmission pipeline**” means a pipeline whether interstate or intrastate, subject to regulation by the United States Department of Transportation under 49 CFR 195, as amended through December 5, 1991, through which oil moves in transportation, including line pipes, valves, and other appurtenances connected to line pipe, pumping units, and fabricated assemblies associated with pumping units.

“**Transfer**” means any movement of oil between a tank vessel or transmission pipeline and the facility.

“**Transfer pipeline**” is a buried or aboveground pipeline used to carry oil between a tank vessel or transmission pipeline and the first valve inside secondary containment at the facility provided that any discharge on the facility side of that first valve will not directly impact waters of the state. A transfer pipeline includes valves, and other appurtenances connected to the pipeline, pumping units, and fabricated assemblies associated with pumping units. A transfer pipeline does not include process pipelines, pipelines carrying ballast or bilge water, transmission pipelines, tank vessel or storage tanks. Instances where the transfer pipeline is not well defined will be determined on a case-by-case basis.

“**Vessel person in charge**” means the person designated under the provisions of 33 CFR 155.700.

“**Waters of the state**” include lakes, rivers, ponds, streams, inland waters, underground water, salt waters, estuaries, tidal flats, beaches and land adjoining the seacoast of the state, sewers, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-030, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-040 Applicability. Onshore and offshore facilities shall meet the requirements of this section. This rule does not apply to portions of a facility regulated by 49 CFR 195.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-040, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-050 Compliance schedule.

- (1) Facilities must comply with this rule thirty-six months after its effective date. Facilities needing additional time to comply with this rule must obtain written approval from the department extending this date and must submit a proposed compliance schedule to the department within eighteen months of the effective date of this rule subject to the following provisions:
 - (a) Compliance schedules must include a justification of need for additional time. Facilities shall cite the specific requirements of this rule which will be addressed by the proposed compliance schedule.
 - (b) Compliance schedules shall contain target dates for the commencement and completion of projects leading to the ultimate compliance with all provisions of this rule.

- (c) Only requirements which cannot be met within thirty-six months of the effective date of this rule need to be identified in the compliance schedule.
 - (d) Compliance schedules which do not meet the definition of best achievable protection will not be approved by the department.
 - (e) It shall be legal to operate a facility if a proposed compliance schedule has been submitted to the department and the department has not provided the facility with a formal response.
- (2) Facilities with approved compliance schedules must:
- (a) Meet all requirements of this rule not specifically addressed in the compliance schedule.
 - (b) Submit a progress report to the department every six months following the compliance schedule approval date.
 - (c) Meet all compliance schedule dates unless written approval is received from the department.
- (3) Facilities commencing construction thirty-six months or later after the adoption date of this rule shall meet the provisions of this rule at the time they commence operation. Facilities under design or construction at the time of the adoption of this rule shall comply with this rule thirty-six months after the adoption date of this rule.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-050, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-060 Vessel transfer requirements.

- (1) General requirements.
- (a) No person shall conduct an oil transfer operation to or from a tank vessel unless the facility person in charge (FPIC) and the vessel person in charge (VPIC) have:
 - (i) Conducted a pretransfer conference as described in 33 CFR 156.120(w) as amended on September 4, 1990;
 - (ii) Ensured that transfer connections have been made as specified in 33 CFR 156.130 as amended on September 4, 1990;
 - (iii) Completely filled out and signed the declaration of Inspection as required by 33 CFR 156.150 as amended on September 4, 1990.
 - (iv) Established adequate communication in English between the vessel and the facility and in accordance with 33 CFR 154.560 as amended on September 4, 1990.
 - (v) Ensured that the available capacity in the receiving tank(s) is (are) greater than the volume of oil to be transferred and all other tank fill valves which could influence the routing of the transferred oil are properly aligned.
 - (b) The operator shall verify that the designated storage tanks are receiving oil at the expected rate.
 - (c) For the purpose of scheduling inspections, the department may require a facility operator to provide a twenty-four hour advance notification with updates to the department of any anticipated transfer of bulk oil by a facility operator. The department shall notify the facility in writing when this procedure will be required.
 - (d) Transfer operations shall be supervised by the appropriate person in charge in accordance with 33 CFR 156.160 as amended on September 4, 1990.
 - (e) Each FPIC shall ensure that the means of operating the emergency shutdown is

- immediately available while oil is being transferred between the facility and the vessel.
- (f) Transfer equipment requirements shall meet the conditions of 33 CFR 154.500 through 33 CFR 154.545 as amended on September 4, 1990.
 - (g) Transfer equipment shall be tested in accordance with procedures identified in 33 CFR 156.170 as amended on September 4, 1990. Transfer hoses shall be tested at intervals not exceeding twelve months in accordance with the procedures identified by the RMA/IP-11-4, Rubber Manufacturers Association Manual for Maintenance, Testing and Inspection of Hose dated 1987 or the manufacturer's recommendations for testing.
 - (h) All transfer operations shall be in accordance with operations manuals approved under chapter 173–180B WAC.
 - (i) The FPIC shall refuse to initiate or shall cease transfer operations with any vessel which has not provided complete information as required by the declaration of inspection, has refused to correct deficiencies identified by the FPIC during the pretransfer conference, or does not comply with the facility operations manual or facility requirements.
- (2) Oil spills.
- (a) Any person conducting an oil transfer shall stop the transfer operation whenever oil from any source associated with the transfer is spilled into the water, or discharged onto the facility deck or dock outside secondary containment, or upon the shoreline adjoining the transfer area.
 - (b) Transfer operations may not resume after a spill until:
 - (i) Notification has been made in accordance with RCW 90.56.280; and
 - (ii) The FPIC and the VPIC have determined that there is no longer an immediate threat to waters of the state or public health.
 - (c) The department may require that transfer operations stopped under subsection (2)(a) of this section may not resume unless authorized by the department.
- (3) Suspension of transfer operations for immediate threat.
- (a) The director may order a facility to suspend transfer operations if there is a condition requiring immediate action to prevent the discharge or threat of discharge of oil or to protect the public health and safety, and the environment.
 - (b) An order of suspension may be made effective immediately.
 - (c) An order of suspension shall specify each condition requiring immediate action.
 - (d) The transfer operation shall remain suspended until the director has determined that the need for immediate action is no longer necessary and has notified the facility operator of that determination.
 - (e) The director shall notify the facility operator as soon as possible of the determination that the need for immediate action is no longer necessary.
 - (f) The facility operator may petition the pollution control board, in writing or in any other manner, to reconsider an order of suspension.

[Statutory Authority: RCW 90.56.220. 94–10–084, § 173–180A–060, filed 5/4/94, effective 6/4/94.]

WAC 173–180A–070 Transmission pipeline transfer requirements.

- (1) General requirements.
- (a) No person shall conduct an oil transfer operation to or from a transmission pipeline unless the appropriate person and the pipeline operator have:
 - (i) Conducted pretransfer communications which identify:

- (A) Type of oil;
- (B) Transfer volume;
- (C) Flow rates;
- (D) Transfer startup or arrival time;
- (ii) Facilities which receive oil from a transmission pipeline must:
 - (A) Confirm that the proper manifold and valves are open and ready to receive product;
 - (B) Notify the transmission pipeline operator when a storage tank has less than one foot of oil above the inlet nozzle;
 - (C) Coordinate arrival time of oil with the pipeline operator;
 - (D) Confirm the available storage capacity for transfers to a facility;
 - (E) Ensure that only the designated tank(s) is (are) receiving oil.
- (iii) Ensured that proper transfer alignment of the pipeline, valves, manifolds and storage tanks have been made.
- (iv) Established adequate communication in English between the facility and pipeline operator.
- (b) For the purpose of scheduling inspections, the department may require a twenty–four hour notification to the department in advance of any transfer of bulk oil by a facility operator. The department shall request notification in writing when this procedure is required.
- (c) Transfer operations shall be supervised by an appropriate person.
- (d) Each facility operator shall ensure that the means of operating or requesting emergency shutdown is immediately available while oil is being transferred between the facility and the pipeline.
- (e) If startup, shutdown, and/or emergency shutdown are controlled by the pipeline operator directly using instrumentation and control devices, the accuracy of these devices shall be checked at least annually.
- (f) All transfer operations shall be conducted in accordance with operations manuals approved under chapter 173–180B WAC.
- (2) Oil spills.
 - (a) Any person conducting an oil transfer shall stop the transfer operation whenever oil from any source associated with the transfer is spilled into the water or upon the adjoining shoreline in the transfer area.
 - (b) Transfer operations may not resume after a spill until:
 - (i) The proper notification has been made in accordance with RCW 90.56.280; and
 - (ii) All threats to waters of the state and public health no longer exist as determined by the appropriate person.
 - (c) The department may require that transfer operations stopped under subsection (2)(a) of this section may not resume unless authorized by the department.
- (3) Suspension of transfer operations for immediate threat.
 - (a) The director may order a facility to suspend transfer operations if there is a condition requiring immediate action to prevent the discharge or threat of discharge of oil or to

protect the public health and safety, and the environment.

- (b) An order of suspension may be made effective immediately.
- (c) An order of suspension shall specify each condition requiring immediate action in writing.
- (d) The transfer operation shall remain suspended until the director has determined that the need for immediate action is no longer necessary and has notified the facility operator of that determination.
- (e) The director shall notify the facility operator as soon as possible of the determination that the need for immediate action is no longer necessary.
- (f) The facility operator may petition the pollution control board, in writing or in any other manner, to reconsider an order of suspension.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-070, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-080 Secondary containment requirements for aboveground storage tanks.

- (1) Aboveground oil storage tanks must be located within secondary containment areas. Secondary containment systems must be:
 - (a) Designed, constructed, maintained and operated to prevent discharged oil from entering waters of the state at any time during use of the tank system;
 - (b) Capable of containing one hundred percent of the capacity of the largest storage tank within the secondary containment area;
 - (c) Constructed with materials that are compatible with stored material to be placed in the tank system.
 - (d) Soil may be used for the secondary containment system, provided that any spill onto the soil will be sufficiently contained, readily recoverable and will be managed in accordance with the provisions under WAC 173-303-145 as amended in December 1993, spills and discharges and any other applicable regulation.
 - (e) Constructed with sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the fluid stored in the storage tank, climatic conditions, and the stresses of daily operations (including stresses from nearby vehicular traffic);
 - (f) Placed on a base or foundation capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression or uplift;
 - (g) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked oil and accumulated precipitation must be removed from the secondary containment system in a manner which will provide the best achievable protection of public health and the environment; and
 - (h) Visually inspected monthly to confirm secondary containment integrity. Items requiring attention as determined by the visual inspection must be documented. Records must be kept on site for a minimum of three years.
- (2) The secondary containment system must be maintained to prevent a breach of the dike by controlling burrowing animals and weeds;

- (3) The secondary containment system must be maintained free of debris and other materials which may interfere with the effectiveness of the system, including excessive accumulated precipitation.
- (4) The facility shall maintain at least one hundred percent of the working capacity of the largest storage tank within the secondary containment area at all times.
- (5) All secondary containment pumps, siphons and valves must be properly maintained and kept in good working order.
- (6) Drainage of water accumulations from secondary containment areas that discharge directly to the land or waters of the state must be controlled by locally operated, positive shutoff valves or other positive means to prevent a discharge. Valves must be kept closed except when the discharge from the containment system is in compliance with chapter 90.48 RCW, Water pollution control. Valves must be locked closed when the facility is unattended. Necessary measures shall be taken to ensure secondary containment valves are protected from inadvertent opening or vandalism. There shall be some means of readily determining valve status by facility personnel such as a rising stem valve or position indicator.
- (7) The owner or operator shall inspect or monitor accumulated water before discharging from secondary containment to ensure that no oil will be discharged to the waters of the state. All water discharges shall comply with state water quality program regulations as described in chapter 90.48 RCW.
- (8) The department may require oil containers less than ten thousand gallons (two hundred thirty-eight barrels) capacity to have secondary containment when the container is located less than six hundred feet from navigable waters of the state or a storm water or surface drains which may directly impact navigable waters of the state.
- (9) A secondary containment system constructed after the adoption date of this rule shall be installed as follows:
 - (a) In accordance with the 1993 version of the National Fire Protection Association (NFPA), Flammable and Combustible Code, No. 30, section 2-3.4.3;
 - (b) Secondary containment systems must be capable of containing one hundred percent of the capacity of the largest storage tank within the secondary containment area;
 - (c) Secondary containment systems shall be designed to withstand seismic forces;
 - (d) Drains and other penetrations through secondary containment areas must be minimized consistent with facility operational requirements; and
 - (e) Secondary containment systems shall be designed and constructed in accordance with sound engineering practice and in conformance with the provisions of this section.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-080, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-090 Storage tank requirements.

- (1) Storage tanks constructed after the adoption date of this rule shall meet or exceed the 1993 version of the National Fire Protection Association (NFPA 30) requirements and one of the following design and manufacturing standards:
 - (a) UL No. 142, Steel Aboveground Tanks for Flammable and Combustible Liquids dated April 1993;

- (b) API Standard 650, Welded Steel Tanks for Oil Storage dated November 1988;
 - (c) API Standard 620, Design and Construction of Large Welded, Low-Pressure Tanks dated June 1990; or
 - (d) Another standard approved by the department.
- (2) The owner or operator shall ensure that the means of preventing storage tank overfill comply with the 1993 version of the National Fire Protection Association (NFPA), Flammable and Combustible Code, No. 30, Chapter 2, Section 2-10.
 - (3) Storage tanks shall be maintained, repaired and inspected in accordance with the requirements of API 653 dated January 1991 unless the operator proposes an equivalent inspection strategy which is approved by the department.
 - (4) A record of all inspection results and corrective actions taken must be kept for the service life of the tank and must be available to the department for inspection and copying upon request.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-090, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-100 Transfer pipeline requirements.

- (1) Pipelines replaced, relocated or constructed after the adoption date of this rule which are located in areas not controlled by the facility shall be installed in accordance with 49 CFR 195.246 through 49 CFR 195.254 as amended on October 8, 1991, where feasible. Facility control is established by fencing, barriers or other method accepted by the department which protects the pipe right-of-way and limits access to personnel authorized by the facility.
- (2) All pipelines shall be protected from third party damage in a reasonable manner and be able to withstand external forces exerted upon them. This shall be done by:
 - (a) Registering all underground pipelines located in public right-of-way areas in the local one call system if available;
 - (b) Maintaining accurate maps for all underground piping located outside the facility. The maps shall identify pipe size and location. The approximate depths of pipelines shall be identified for pipelines which do not comply with 49 CFR 195.248 as amended on October 8, 1991;
 - (c) Marking all piping located in areas not controlled by the facility in accordance with 49 CFR 195.410 as amended on October 8, 1991;
 - (d) Providing easement inspections of areas identified by subsection (2)(b) of this section on a weekly basis to determine if there is any uncommon activity occurring which may affect the integrity of the pipeline;
 - (e) Ensuring that pipelines at each railroad, highway or road crossing are designed and installed to adequately withstand the dynamic forces exerted by anticipated traffic loads.
- (3) Pipelines constructed after the adoption date of this rule shall be designed and constructed in accordance with the American Society of Mechanical Engineers (ASME) Standard for pressure piping ASME B31.3 or B31.4 issued March 15, 1993, in effect during the time of construction or any other standard accepted by the Department.
- (4) Pipelines must be inspected in accordance with API 570, 1993, Piping Inspection Code. As an alternative to complying with API 570, the facility must comply with the following requirements:

- (a) Buried pipelines constructed after the adoption date of this rule must be coated. Coatings shall be designed and inspected to meet the following conditions consistent with the definition of best achievable protection:
 - (i) Coatings shall effectively electrically isolate the external surfaces of the pipeline system from the environment.
 - (ii) Coatings shall have sufficient adhesion to effectively resist underfilm migration of moisture.
 - (iii) Coatings must be sufficiently ductile to resist cracking.
 - (iv) The coating shall have sufficient impact and abrasion resistance or otherwise be protected to resist damage due to soil stress and normal handling (including concrete coating application, installation of river weights and anode bracelet installation, where applicable).
 - (v) The coating must be compatible with cathodic protection.
 - (vi) The coating must be compatible with the operating temperature of the pipeline.
 - (vii) Coatings shall be inspected immediately before, during, or after pipe installation to detect coating faults. Faults in the coating shall be repaired and reinspected.
- (b) All buried coated pipelines shall have properly operated cathodic protection which is maintained during the operational life of the pipeline system. Cathodic protection shall be maintained on pipeline systems which are out of service but not abandoned unless the operator can show that the pipeline integrity has been properly monitored and secured as approved by the department prior to operation of the abandoned pipeline. Pipeline owners or operators may perform a corrosion study to demonstrate that cathodic protection is not required as an option to installing cathodic protection. Corrosion studies shall follow the following guidelines as a minimum:
 - (i) Corrosion studies shall be completed by a professional engineer with experience in corrosion control of buried pipelines, a NACE certified corrosion specialist or by a person knowledgeable and qualified to perform the required testing and inspection who is approved by the department.
 - (ii) Corrosion studies for pipelines shall include at a minimum, the following:
 - (A) Pipeline thickness and corrosion rate for existing pipelines;
 - (B) Presence of stray DC currents;
 - (C) Soil resistivity/conductivity;
 - (D) Soil moisture content;
 - (E) Soil pH;
 - (F) Chloride ion concentration; and
 - (G) Sulfide ion concentration.
- (c) All pipelines with cathodic protection are subject to the following requirements where applicable:
 - (i) Cathodic protection systems must be tested to determine system adequacy on an annual basis.

Note: The National Association of Corrosion Standard RP-02-85, "*Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage*"

Systems,” may be used to comply with this section.

- (ii) Impressed current cathodic protection rectifiers must be inspected every two months.
 - (iii) Where insulating devices are installed to provide electrical isolation of pipeline systems to facilitate the application of corrosion control, they shall be properly rated for temperature, pressure and electrical properties, and shall be resistant to the commodity carried in the pipeline system.
 - (iv) Buried pipeline systems shall be installed so that they are not in electrical contact with any metallic structures. This requirement shall not preclude the use of electrical bonding to facilitate the application of cathodic protection.
 - (v) Tests shall be carried out to determine the presence of stray currents. Where stray currents are present, measures shall be taken to mitigate detrimental effects.
- (d) Buried bare pipelines shall be inspected in accordance with section 7 of API 570 dated June 1993. Pipeline thickness and corrosion rates shall be determined at an interval of no more than half of the remaining life of the pipeline as determined from corrosion rates or every five years whichever is more frequent. Pipeline thickness and corrosion rate shall be initially established within thirty-six months after the adoption date of this rule. The pipeline shall be operated in accordance with American Society of Mechanical Engineers (ASME) supplement to ASME B31G–1991 entitled “Manual for Determining the Remaining Strength of Corroded Pipe” for transmission pipelines issued June 27, 1991, API 570 dated June 1993 or a standard approved by the department.
- (5) Whenever any buried pipe is exposed for any reason, the operator shall provide a nondestructive examination of the pipe for evidence of external corrosion. If the operator finds that there is active corrosion, the extent of that corrosion must be determined and if necessary repaired.
 - (6) Each facility shall maintain all pumps and valves that could affect waters of the state in the event of a failure. Transfer pipeline pumps and valves and storage tank valves shall be inspected annually and maintained in accordance with the manufacturers recommendations or an industrial standard approved by the department to ensure that they are functioning properly. Valves shall be locked when the facility is not attended. Necessary measures shall be taken to ensure that valves are protected from inadvertent opening or vandalism if located outside the facility or at an unattended facility.
 - (7) A written record must be kept of all inspections and tests covered by this section.
 - (8) Facilities shall have the capability of detecting a transfer pipeline leak equal to eight percent of the maximum design flow rate within fifteen minutes for transfer pipelines connected to tank vessels. Leak detection capability shall be determined by the facility using best engineering judgment. Deficiencies with leak detection systems such as false alarms must be addressed and accounted for by the facility. Facilities may meet these requirements by:
 - (a) Visual inspection provided the entire pipeline is visible and inspected every fifteen minutes; or
 - (b) Instrumentation; or
 - (c) Completely containing the entire circumference of the pipeline provided that a leak can be detected within fifteen minutes; or
 - (d) Conducting an acceptable hydrotest of the pipeline immediately before the oil transfer with

visual surveillance of the exposed pipeline every fifteen minutes; or

(e) A combination of the above strategies; or

(f) A method approved by the department which meets the standard identified in this section.

Leak detection system operation and operator response must be described in the facility operations manual.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-100, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-110 Inspections. The department may verify compliance with this chapter by announced and unannounced inspections in accordance with RCW 90.56.410. During an inspection the department may require the facility to provide proof of compliance by producing all required records, documents as well as demonstrating spill prevention equipment and procedures required by this rule.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-110, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-120 Recordkeeping. Records required by this rule shall be maintained and available for a minimum of three years. Storage tank and pipeline records shall be maintained for the life of the equipment. Records shall be available to the department for inspection or photocopying upon request.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-120, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-130 Noncompliance. Any violation of this chapter may be subject to the enforcement sanctions of chapters 90.48 and 90.56 RCW.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-130, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-140 Rule review. The department shall review the requirements of this section every five years to ensure that best achievable protection of public health and environment is being achieved. This review shall include a review of current and updated industry standards, federal and state regulations, equipment and operational procedures.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-140, filed 5/4/94, effective 6/4/94.]

WAC 173-180A-150 Severability. If any provision of this chapter is held invalid, the remainder of this rule is not affected.

[Statutory Authority: RCW 90.56.220. 94-10-084, § 173-180A-150, filed 5/4/94, effective 6/4/94.]