



Small Tank Farms & Terminals

A Guide for Class 3 Facilities



Spill Prevention, Preparedness, and Response Program
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The purpose of this document is to provide a detailed description of Ecology's expectations of Class 3 facilities because of the oil transfer rule as referenced in WAC 173-180 Facility Oil Handling Standards.

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The Washington State Department of Ecology (Ecology) designed the oil transfer rules to prevent spills when transferring oil over water. Historically, bulk oil transfers have contributed to the majority of spills in state waters. The rules' citations in the Washington Administrative Code (WAC) are chapter 173-180 WAC for facilities.

A **Class 3** facility is a small tank farm or terminal that transfers oil to non-recreational vessels* with a fuel capacity of 10,500 gallons or more.

Determine the rate of your transfers and follow the applicable requirements.

- **Rate A** transfers are over 500 gallons per minute.
- **Rate B** transfers are 500 gallons per minute or less.

If I Have an Oil Spill, What Do I Do?

The Person-In-Charge (PIC) must report oil spilled in the water, on the shoreline adjoining the transfer areas, in to containment or to a vessel deck to:

National Response Center: **1-800-424-8802 AND**

Washington Emergency Management Division: **1-800-258-5990 OR
1-800-OILS-911**

The PIC may resume an oil transfer after meeting the following conditions:

1. The source of the spill is controlled, contained and a proper response is underway.
2. The PICs must agree there is no further threat of a spill.
3. If the spill is to water, you must have approval from the state on-scene coordinator in conjunction with the federal on-scene coordinator to continue the transfer.

What are the Requirements for Oil Transfer Operations at Class 3 Facilities?

Advance Notice of Transfer

The delivering facility transferring more than 100 gallons of oil to a non-recreational vessel must notify Ecology at least 24 hours before the oil transfer. If you are not able to meet the 24-hour requirement, you must notify Ecology as soon as possible. The notice of transfer must use the Ecology “Advance Notice of Transfer Form.” The form can be submitted either electronically using the website, by email to OilTransferRule@ecy.wa.gov or by fax. The secure website requires a login and password and is located at <https://secureaccess.wa.gov/ecy/ants>.

Designating the Person-In-Charge (PIC)

All owners and operators of Class 3 facilities transferring oil in bulk on or over state waters to a non-recreational vessel with a capacity of 10,500 gallons or more must designate a PIC. The PIC is responsible for supervising the oil transfer. Training of all personnel involved in the transfer must be sufficient to ensure a safe transfer.



Pre-Transfer Conference

Under the rules, a face-to-face conference between the receiving and delivering PICs must occur prior to the oil transfer. The PICs must be able to communicate in English during this pre-transfer conference.

The PICs must discuss and approve the pre-transfer plan, the contents of the Document of Inspection (DOI), the procedures for communicating soundings, changing over tanks, topping off, shift changes, and emergency shutdown, as well as possible impacts of predicted weather and/or sea conditions. If applicable, the conference will identify the point-of-transfer watch and deck-rover watch on the vessel. The PICs may conduct this conference via radio if weather conditions make moving from vessel to facility unsafe.

Pre-Loading or Cargo Transfer Plan

Complete a pre-load or cargo transfer plan prior to the pre-transfer conference. At a minimum, the plan must include:

- Identification, location, and capacity of the tanks receiving oil (if applicable).
- Level and type of liquid in all bunker or cargo oil tanks prior to the oil transfer.
- Planned final “ullage” (the depth of space above the free surface of the oil) and planned final “innage” (the difference from the surface of the oil to the tank bottom).
- Planned final percent of each tank to be filled.
- Sequence in which the tanks will be filled.
- Facility’s procedures to monitor all receiving tank levels and valve alignments regularly during the transfer operation.

Communication between PICs

The facility PIC must ensure continuous, two-way voice communication between the delivering and receiving PICs throughout all phases of the transfer operation. The facility PIC must ensure that two portable intrinsically safe communication devices are available for use during the transfer.

An air horn must be available for emergency shutdown signals and all personnel involved in the oil transfer must know and use English phrases and hand signals indicating **STOP, HOLD, WAIT, FAST, SLOW, and FINISH.**

Safe Transfer Operational Requirements

Conduct all transfers in accordance with the facility's approved operations manual.

Make all transfer connections using appropriate materials. Use a bolted or full threaded connection or a quick-connect coupling with a means of securing the coupling to prevent accidental release.

Use a new compressible gasket appropriate for the product and transfer pressure. For flanged connections, use a bolt in every available hole of the correct size for each bolted connection.

Ensure that each bolt is properly torqued to distribute the load to ensure a leak-free seal.

Do not use any bolt that shows signs of strain or is elongated or deteriorated.

All persons involved in an oil transfer must have the means to contain and recover any drips or leaks from connections within the oil transfer system.

Deliverers providing oil without fixed containment must provide adequate portable containment for each tank vent.

Before the transfer starts, the PICs must verify that:

- Both PICs sign the Document of Inspection (DOI).
- The available capacity in the receiving tank(s) is (are) greater than the volume of oil to be transferred.
- Alignment of all valves has occurred.
- An emergency shutdown system is in place and is operable.



Once the transfer starts, the PICs must ensure the tanks designated in the pre-transfer plan are receiving oil at the planned rate. If a shift change occurs, the relieving PIC must notify the person in charge at the other end of the transfer and sign the DOI.

The delivering PIC must refuse to start or continue an oil transfer if the receiving PIC:

- Has not provided complete information. (The Document of Inspection requires this.)
- Has refused to correct deficiencies identified in the pre-transfer conference.
- Does not comply with the operations manual.
- Does not respond to identified concerns.
- Has refused to discuss the pre-load plan and oil transfer rate.

Emergency Shutdown

There must be an emergency shutdown capable of stopping the flow of oil to a vessel. This can be either:

- An electrical, pneumatic or a mechanical linkage to the facility.
- An electronic voice communications system continuously operated by a person on the facility who can stop the flow of oil.

The emergency shutdown must be located at the PICs usual operating station and at the dock manifold, if not the same location.

The emergency shutdown must stop the flow within thirty seconds. Both PICs must be capable of ordering or activating an emergency shutdown.

Immediately activate an emergency shutdown if a PC orders it.

Work Hours

Facility personnel with oil transfer duties may NOT work more than 16 hours in any 24-hour period; or more than 40 hours in any 72-hour period. The exception would include:

- Working in an emergency.
- Responding to a spill.

Work hour records demonstrating compliance with work hour restrictions must be maintained for three years.

Safe Access

Safe access for personnel must be provided if the vessel cannot provide the safe access. The access must be secured at both the top and bottom to prevent movement of the access platform.



Illuminate the entire ladder and the portion of the facility and ship's deck during low light or low visibility situations. There should be no glare to the persons using the access.

If weather conditions make the access unsafe, the PICs may elect to use radio communication.

Oil Transfer Equipment

Requirements

All boom and associated equipment for deployment must be of the appropriate size and design for the environmental conditions encountered in the transfer area(s) based on the manufacturers' specifications.

All Class 3 facilities' oil transfer hoses and/or piping used in oil transfer operations must meet the following criteria:

- Support hoses and piping to avoid crushing or excessive strain.
- Visually check all flanges, joints, hoses, and piping for cracks and leakage prior to transferring oil.
- Must be in good condition and not have any loose covers, cracks, kinks, bulges, soft spots, or other defects that penetrate the hose reinforcement layer.
- Hoses or piping must not be permitted to chafe on the dock or vessel or be in contact with any other surface that might damage the hoses or piping.
- All hoses and loading arms must be long enough to allow the vessel to move to the limits of its moorings without excessive strain on the oil transfer equipment.

- Tightly close hose ends with properly secured flanges when they are moving into position for connection and immediately after they are disconnected.
- Drain all residue in the hose or loading arm either into the vessels tanks or into suitable shore receptacles before moving away from the point of connection.

Testing

Annual tests of all oil transfer equipment such as pumps, valves, piping, manifolds, connections, and hoses are required. Do these tests in accordance with the manufacturer's recommendations and industrial standards – or through procedures identified under federal regulations.

Keep the design, construction, and repair records for storage tanks and pipelines and all oil transfer equipment testing for the life of the equipment. Keep inspection, maintenance, and repair records for pumps, valves, manifolds, and other ancillary equipment used in oil transfers for ten years.

Pre-Booming – Rate A Transfers

You must be able to disconnect all boom in the event of an emergency quickly.

The **Rate A** deliverer must pre-boom oil transfers when it is safe and effective to do so. When pre-booming is not safe and effective, the deliverer must meet the alternative measure requirements.

When it is not safe and effective, or when conditions develop during a pre-boomed transfer that requires the removal of the boom, the **Rate A** deliverer must report this finding to Ecology using the Boom Report Form.

Requirements – Rate A

- Boom four times the length of the largest vessel involved in the transfer or 2,000 feet, whichever is less. Deploy the boom so that it completely surrounds the vessel(s) and facility/terminal dock area directly involved in the oil transfer operation; or the deliverer may pre-boom the portion of the vessel and transfer area which will provide for maximum containment of any oil spilled into the water.

- Minimum standoff of five feet away for the boom from the sides of a vessel, measured at the waterline.



- You must periodically check the boom positioning and adjust as necessary throughout the duration of the transfer and specifically during tidal changes and significant wind or wave events.
- Containers suitable for holding the recovered oil and oily water.
- Non-sparking hand scoops, shovels, and buckets.
- Enough sorbent materials and storage capacity for a seven-barrel oil spill appropriate for use on water or land.
- Within one hour of a spill, you must be able to complete deployment of the remaining boom, should it be necessary for containment, protection, or recovery purposes.

Alternative Measures – Rate A

- Access to boom four times the length of the largest vessel involved in the transfer, or 2,000 feet, whichever is less.
- Containers suitable for holding the recovered oil and oily water.
- Non-sparking hand scoops, shovels, and buckets.
- Enough sorbent materials and storage capacity for a seven-barrel oil spill appropriate for use on water or land.
- Ability to track the spill in low visibility conditions safely. Within thirty minutes of a spill, the tracking system must be on-scene.
- The deliverer must surround the vessel(s) and facility/terminal dock area directly involved in the oil transfer operation within one hour of a spill; or the deliverer may pre-boom the portion of the vessel and transfer area that will provide for maximum containment of any oil spilled into the water.
- Within two hours of being made aware of a spill, the deliverer must have the following:

- Additional boom four times the length of the largest vessel involved in the transfer, or two thousand feet, whichever is less, available for containment, protection, or recovery.
- A skimming system must be on-site. The skimming system must be in stand-by status and be capable of fifty barrels recovery and one hundred barrels of storage.

Pre-Booming - Rate B Transfers

The **Rate B** deliverer must choose to meet either the pre-booming requirements or the alternative measures.

Requirements – Rate B

- Boom completely to surround the vessel(s) and facility/terminal dock area directly involved in the oil transfer operation or the portion of the vessel and transfer area that will provide for maximum containment of any oil spilled into the water.
- Minimum standoff of five feet away from the sides of a vessel, measured at the waterline.
- Periodically check boom positioning and adjust the boom as necessary throughout the duration of the transfer. Specifically monitor boom during tidal changes and significant wind or wave events.
- Containers suitable for holding the recovered oil and oily water and non-sparking hand scoops, shovels, and buckets are readily accessible.
- Maintain enough sorbent materials and storage capacity for a two-barrel oil spill appropriate for use on water or land.
- Deploy an additional 500 feet of boom within one hour of a spill. Use this boom for containment, recovery, or protection.

Alternative Measures – Rate B

- Access to boom sufficient to completely surround the vessel(s) and facility/terminal dock area directly involved in the oil transfer operation; or the portion of the vessel and transfer area that will provide for maximum containment of any oil spilled into the water.
- Containers suitable for holding the recovered oil and oily water.
- Non-sparking hand scoops, shovels, and buckets.

- Enough sorbent materials and storage capacity for a two-barrel oil spill appropriate for use on water or land.
- Within one hour of becoming aware of a spill, the deliverer must be able to complete deployment of an additional 500 feet of boom for containment, protection or recovery.
- Within two hours of a spill, the deliverer must have an additional 500 feet of boom available on-scene for containment, protection, or recovery.

Recordkeeping

Records required by the oil transfer rule must be maintained and available to Ecology for a minimum of three years, except for the following:

- Preload plans and declaration of inspection (DOI) kept for at least thirty days from date of the oil transfer operation.
- The design, construction, and repair records for storage tanks, pipelines and all oil transfer equipment testing and repair records kept for the life of the equipment.
- Keep all inspection, maintenance, and repair records for pumps, valves, manifolds, and other ancillary equipment used in oil transfers for ten years.

Ecology Spills Program web site:

<http://www.ecy.wa.gov/programs/spills/spills.html>

Notifications: OilTransferNotifications@ecy.wa.gov

*** Non-Recreational Vessel Description**

A **non-recreational vessel** is a vessel owned and operated for monetary gain. It also may be leased, rented or chartered to another and used for monetary gain.

Some examples of **non-recreational vessels** are:

- Sightseeing or tour boats
- Passenger vessels
- Chartered fishing boats
- Boats used for parasailing
- Tug boats, etc.

This definition is based on the vessel's use, not its size.