

## BUNKERING OPERATIONS WITHIN THE WATERS OF PUGET SOUND AND THE STRAIT OF JUAN DE FUCA

### SOC Quick Reference

Risk	Section
General Information	A
• Definitions	A - 3
• Regulations	A - 4
Standard of Care – Bunkering in General	B
• Heavy weather	B - 1
• Personnel / Access Between Vessels	B - 2
• Mooring Equipment	B - 3
• Tug Availability	B - 4
• Response Equipment	B - 5
• Number of Vessels Involved	B - 6
• Flow Rate, Topping off	B - 7
• Watch Keeping	B - 8
• Notifications	B - 9
• Anchorage Management	B - 10
Standard of Care – Bunkering During Container Operations	C
• Overview	C - 1
• Initial Agreement	C - 2
• Essential Communications: Contact Between Tankerman and Terminal	C - 3
• Area or Zone of Concern	C - 4
• Incident Response	C - 5
• Long Term Incident Resolution	C - 6
Enclosure (1) Example Advance Notice of Transfer Operations (fax)	
Enclosure (2) Example Advance Notice of Transfer Operations (online)	
Enclosure (3) Quick Reference Guide Regarding Bunkering Container Vessels During Cargo Operations	

**A. GENERAL INFORMATION**

1. The waters of Puget Sound and the Strait of Juan de Fuca are environmentally sensitive and a precious environmental and economic resource. Bunkering operations, while routine in many parts of the country, do in fact pose risks different than those normally expected of standard shore to ship refueling operations. Coast Guard Sector Seattle, the State of Washington Department of Ecology and representatives of the petroleum industry have jointly developed the following guidelines to address those risks and ensure safe bunkering operations in the Puget Sound region.
2. Bunkering Operations within Washington waters are subject to both U.S. Coast Guard regulations, Title 33 Code of Federal Regulations, Parts 155 and 156, and Washington state regulations addressing oil transfer operations. These regulations are listed in paragraph 7 below. Beyond the regulations, the guidelines below represent the cooperative efforts of the Coast Guard, Washington State and industry leaders to develop the best way to further mitigate risks to the environment during bunkering operations. As such, it is expected that industry members follow them, educate and enforce them among industry groups and make recommendations to the Coast Guard and Puget Sound Harbor Safety Committee as changes are needed. Vessels intending to conduct bunkering operations while at anchor should also carefully review the guidance in the following additional standards of care included within this Harbor Safety Plan:
  - a. Heavy Weather
  - b. Anchorage Management
3. Some bunkering operations are conducted along vessels at berth and, in the case of container vessels, may be conducted simultaneously with container operations. This adds some additional risk to bunkering operation and the personnel involved for which additional precautions are necessary. The procedures associated with these bunkering operations is covered in section C below.
4. Sector Seattle and Washington State Department of Ecology inspectors frequently monitors fuel / oil transfer operations throughout Puget Sound based on the level of risk, amount of fuel / oil, familiarity with company operations, procedures and track records. Either agency may stop any bunkering operation or prohibit planned operations due to safety concerns or unacceptable risk.
5. Sector Seattle will periodically review the safety record of bunkering operations and work with the Harbor Safety Committee to determine if changes are needed to promote safety. Changes could include additional guidelines or a formal regulatory initiative.

6. **Definitions:** In addition to the terms defined in applicable federal regulations, the following definitions apply:
  - a. Bunkering: The transfer of petroleum base products from one vessel to another vessel for the purpose of replenishing fuel for vessel propulsion, hotel services or machinery lubrication while at anchor or dockside.
  - b. Receiving Vessel: The vessel receiving the fuel or lubes in a bunkering operation.
  - c. Delivering Vessel: The vessel delivering the fuel or lubes in a bunkering operation
  - d. Moderate Weather: Sustained winds from 21 to 33 knots or higher gusts (Small Craft Advisory).
  - e. Heavy Weather: Sustained winds from 34 to 47 knots or higher gusts (Gale Warnings).
  
7. **Regulations:** Bunkering operations must be conducted in strict accordance with the letter and intent of all regulations. If there is a conflict, real or perceived, between the regulations and the guidelines in this document, then the regulations shall take precedence. However, any such conflict should be reported to the Harbor Safety Committee. Bunkering operations fall under the following regulations:
  - a. 317-40 WAC Bunkering Operations
  - b. 33 CFR 153 Notice of Discharge and Removal of Discharged Oil
  - c. 33 CFR 155 Oil or Hazardous Material Pollution Prevention Regulations for Vessels
  - d. 33 CFR 156 Oil and Hazardous Material Transfer Operations
  - e. 46 CFR 30-40 Tank Vessels
  - f. 173-184 WAC Vessel Oil Transfer Advance Notice and Containment Requirements
  
8. **Other applicable Industry Standards:** The following references contain worldwide industry standards, and should also be consulted for applicability to Puget Sound bunkering operations:
  - a. Oil Companies International Marine Forum Guidelines (OCIMF) Ship to Ship Transfer Guide
  - b. Oil Spill Risks from Tank Vessel Lightering - published by the Commission on Engineering and Technical Systems (CETS)

**B. STANDARD OF CARE – BUNKERING IN GENERAL**

**1. Heavy Weather**

- a. **Wind:** Vessels will not come alongside in preparation for bunkering at anchor or pier side if sustained winds are at or exceed 30 knots or wind gusts exceed 40 knots. If bunkering operations have already begun when sustained winds reach 30 knots or gusting over 40 knots personnel in charge of bunkering operations will continuously monitor environmental conditions and take any additional measures necessary to reduce risk of injury, vessel damage or pollution, and prepare for worsening weather. When sustained winds reach 40 knots bunkering operations will cease and hoses will be drained and disconnected. Personnel should consult separate guidance issued by Sector Seattle and the Puget Sound Harbor Safety Committee regarding heavy weather and anchoring procedures relevant to all vessels. Underway bunkering is not considered prudent under any conditions within Puget Sound waters.
- b. **Seas:** For bunkering operations from one vessel to another vessel while at anchor, operations will cease, with hoses drained and disconnected when waves or swells reach 3 ft. The wind and sea conditions criteria have been developed with industry input and are used by operating companies in the area. These standards are based on historical observations and experience in handling these vessels under prevalent conditions.
- c. **Sheltered Waterway:** The foregoing wind and sea guidelines may not be applicable when a receiving vessel is being bunkered at a wharf or pier in a sheltered waterway. The criteria for securing a bunkering operation in these types of locations would be dependant upon adverse movement of either the receiving vessel or delivering vessel caused by the prevailing wind or sea conditions.

2. **Personnel / Safe Access Between Vessels:** The delivering vessel and receiving vessel shall each have a designated Person in Charge (PIC) that is in charge of the transfer on their respective vessels. The receiving vessel shall provide safe access in order to facilitate face to face communications between the receiving and delivering vessels for purposes of a pre-transfer conference and other required communications.

3. **Mooring Equipment:** All parties will use fenders of sufficient size and type to prevent steel to steel contact between the two vessels. Mooring lines will be of sufficient size and type to hold the delivering vessel along side the receiving vessel during expected tidal, wave, and wind conditions.

4. **Tug Availability:** During bunkering operations in moderate to heavy weather conditions involving vessels at anchor, at least one tug will remain on scene and ready to render assistance during the entire evolution. The attending tug(s) must have sufficient horsepower to maneuver and control at least the delivering vessel

involved in the bunkering operation under all conditions. Vessel to vessel operations may take place without direct tug assistance, once the mooring portion of the operation has been completed. The attending tug or a designated tug must be on immediate standby in the area to render assistance in less than 30 minutes. This standard does not apply to delivering vessels that are self propelled.

5. **Response Equipment:** In addition to the vessel's Vessel Response Plan requirements, the following pollution prevention and mitigation measures must be met:
  - a. When bunkering operations take place, and when it is safe and effective to do so, containment boom capable of encircling the entire operation must be in place with at least a five foot stand-off from the vessel; or
  - b. Boom must be positioned to provide for the maximum containment of any oil potentially spilled. Each vessel that delivers oil at a rate exceeding 500 gallons per minute is obligated to have developed and implemented pre-booming strategies using such thresholds under state requirements which became in full force after October 26<sup>th</sup>, 2007.
  - c. Where it is not safe and effective to pre-boom transfer operations then such length of boom will be made available on scene and ready for immediate deployment such that the boom could be completely in place within 1 hour of detection of a spill, unless the vessel has an equivalent compliance plan approved by ecology and accepted by the USCG COTP.
  - d. The standby booming requirement can be met by the equipment normally carried by barge or by a dedicated response vessel or by both.
  - e. If this requirement is met without a response vessel then a small boat capable of deploying the boom in a timely fashion must be on scene and immediately available.
  - f. If both the barge and the response vessel contribute toward this requirement, the equipment must be compatible.
  - g. Adequate personnel shall be on scene to take appropriate actions on the vessels, while simultaneously deploying boom.
  - h. Personnel shall be trained in deploying boom and the boom and response equipment shall be prepared so that it can be deployed with the absolute minimum of delay.
  
6. **Number of Vessels Involved:** A receiving vessel may receive bunkers and lubricating oils from two separate delivering vessels at the same time, provided:
  - a. Each transfer has a separate Person in Charge ('PIC') unless otherwise approved by the Coast Guard Captain of the Port.
  - b. That each system is completely separate from the other or is otherwise affirmatively isolated or segregated by means of blank (spectacle) flanges which may be visually verified.

7. **Flow Rate, Topping Off and Gauging Procedures:** In accordance with OCIMF Ship to Ship Transfer Guide and Washington State Transfer Rules.
8. **Watchkeeping:** A qualified Person in Charge (PIC) shall be on watch and monitor the bunkering operation on the receiving vessel and delivering vessel. A qualified deck officer shall maintain oversight over the operation and navigation/anchor watch on both the receiving vessel and any tug attending the bunkering barge/tanker. The delivering vessel must maintain constant communications with Puget Sound VTS on the appropriate working frequency, either 5A or 14, throughout the bunkering operation when operations are being done in moderate to heavy weather.
9. **Notifications:** Companies wishing to conduct bunkering operations must submit an advance notice of oil transfer (ANT) to the USCG and Washington State DOE via fax (see enclosure 1) or through the Ecology ANT website (see enclosure 2). This notice must be sent at least 4 hours prior to commencement of bunkering operations. The delivering vessel or attending tug shall also notify Puget Sound Vessel Traffic Service (PSVTS) via the appropriate working frequency immediately prior to starting and immediately after stopping transfers, using (approximately) the following language:
  - a. "Seattle Traffic, this is the T/V \_\_\_\_\_, commencing bunkering operations. On scene weather is within parameters."
  - b. "Seattle Traffic, this is the T/V \_\_\_\_\_. Bunkering operations are secured."
10. **Anchorage Management:** Vessels desiring to bunker in designated anchorages in Puget Sound are reminded to consult the Sector Seattle guidance on securing anchorage reservations.
  - a. PSVTS manages the anchorages in Puget Sound and adjacent areas for the Captain of the Port. For safety reasons, each anchorage has a restricted number of anchorage spaces available and are normally reserved on a "first come, first served" basis. To allow a more efficient and fair allocation of available space the VTS asks that:
    - (1) Reservations be made as far in advance of arrivals as possible.
    - (2) Revisions of ETA's and ETD's be made as they become known.
  - b. Anchorage reservations will not be accepted in high usage areas such as Elliott Bay or Port Angeles if there is a possibility of delay due to uncertain orders.
  - c. With these considerations, the occasions of a vessel being denied anchorage or being ordered to depart to make room for another vessel should be infrequent.
  - d. Bunkering at non-protected anchorages during heavy weather conditions is not recommended and will be allowed solely based on current or forecasted wind and sea conditions.
  - e. Bunkering operations are normally permitted in Anacortes, Port Angeles, Elliott Bay and Commencement Bay. Bunkering operations at **Vendovi Island**,

Anacortes East, and Smith Cove West anchorages will only be allowed on a case-by-case basis depending on current or forecasted weather conditions. Requests to bunker in other locations should be submitted to Sector Seattle at least 72 hours in advance. In Port Angeles, vessels receiving bunkers will be required to be well into the harbor, west of the line drawn from the ITT Rainier Dock north to the red buoy off the tip of Ediz Hook.

**C. STANDARD OF CARE – BUNKERING DURING CONTAINER OPERATIONS**

1. **Overview:** This section outlines the process for essential communication between the agents, bunker barge operators (tankermen) and a terminal's Marine Department to ensure a safe and productive work environment when bunkering a vessel at the same time as container operations are being conducted. An outline on understanding bunkering process is provided as Enclosure 3 to this SOC.
2. **Initial Agreement:**
  - a. The agent will ensure notice of bunkering operations is given to the vessel crew, terminal operator and the bunkering company prior to the stevedoring operation.
  - b. Points of contact and contact information (e.g., phone/cell numbers) will be shared among the terminal, vessel and bunkering company personnel who will be working during that bunkering operation. Having this contact information serves as the cross check that all parties are aware of the planned bunkering operation.
3. **Essential Communications: Contact Between Tankerman and Terminal:**
  - a. The designated facility contact (as identified in C.2.b above) must be present at the pre-transfer conference between the bunker barge operator (tankerman) and the vessel's person in charge for receiving bunkers. The designated facility contact will then give notice to the stevedores that bunkering operations are about to begin and will also allow the tankerman to learn details of the planned stevedore operations that might present possible conflicts.
  - b. The designated vessel contact for cargo operations (e.g. Chief Mate) will make contact with the bunker barge representative (tankerman) prior to beginning the bunkering operation. This will allow the tankerman to learn the details of the planned stevedore operation that might present possible conflicts. This contact may be in addition to or simultaneous with the required pre-transfer conference.

- c. **Tankerman Check Sheet:** In making contacts with the designated facility and vessel points of contact, the tankerman needs to identify the following:
- (1) What are the bay designations directly forward and aft of the house on this vessel that may overlap the bunker barge?
  - (2) Is there any planned loading, discharging, or lashing in these bays?
  - (3) When does the terminal plan to work these bays?
  - (4) Is any of the work in these bays going to extend into the two or three offshore positions?
  - (5) Can these positions be worked in a specific time frame so possible conflicts are avoided?
  - (6) What time periods are the stevedores going to shut down cargo operations for breaks, lunch, etc.?
4. **Area or Zone of Concern:** Tankermen, terminal personnel (Superintendents, Foremen, Lashers, Crane Operators) and vessel personnel (Chief Mate and Chief Engineer) all must be mindful of and take particular care when lashing or cargo operations take place in the outer three stacks of containers in those bays adjacent to the bunker barge particularly when the transfer is in progress, and immediately before and after the bunkering operation. Since virtually all bunker oil transfer operations in Washington waters require the vessel(s) and facilities involved to be surrounded by oil containment boom prior to oil transfer commencing, all personnel involved in cargo loading/lassing operations need to be particularly alert for small vessel boom deployment and retrieval operations adjacent to the ship both immediately before and after the bunkering operation takes place. If at any time in the judgment of the tankerman the bunkering operation is at risk due to ongoing container operations he will secure the fuel transfer to the ship and contact the vessel representative.
5. **INCIDENT RESPONSE**
- It is expected that the Tankerman will be alert to the crane working near the barge and the cargo flow that has been planned.
  - It is expected that the Tankerman will determine the proper action to take regarding oil transfer process should any incident occur which affects the safety of the operation including the safety of the boom deployment personnel and vessels.
  - Any incident will require direct communications between the parties involved who shall be readily available. This will allow for adjustments to working plans to correct conflicts.
6. **LONG TERM INCIDENT RESOLUTION**
- It is expected that the Port/Terminal Operations Department's management personnel, vessel representative, and the barge operator will discuss mutually agreeable adjustments in the cargo and bunkering operations to minimize tankerman exposures that may be determined as the result of an incident and the post incident investigation.
  - Ideas and lessons learned will be shared between all parties including the other port terminals.



## Advance Notice of Oil Transfer

To: Prevention Section  
Dept. of Ecology, Spills Program

FAX: 1-800-664-9184 or E-mail to [OilTransferNotifications@ecy.wa.gov](mailto:OilTransferNotifications@ecy.wa.gov)

<b>* - Indicates required fields by rule</b>			
Questions about Advance Notice of Transfers can be answered by calling 360-407-7390			
*Delivering Company Name:			
*Company Address:			
*Company Contact Name:		*Contact Phone Number:	
*Start Date: (mm/dd/yy)		*Start Time: (hhmm)(24-hr clock)	
*Duration (hh.mm): (decimal hours)			
Deliverer Type: (Check one)	Vessel <input type="checkbox"/>	Fixed Facility <input type="checkbox"/>	Mobile <input type="checkbox"/>
*Name of Deliverer:			
Receiver Type: (Check one)	Vessel <input type="checkbox"/>	Fixed Facility <input type="checkbox"/>	
*Name of Receiver:			
Berth Location:	Anchor Location:		
*Address or Location of Transfer:			
*City of Transfer:			
*Product or Type of Oil(s):			*Quantity: Gallons <input type="checkbox"/> or Barrels <input type="checkbox"/>
1	2	3	1 2 3
/	/		/ /
Purpose of Transfer: <input type="checkbox"/> Cargo <input type="checkbox"/> Fueling <input type="checkbox"/> Lube/Hydraulic <input type="checkbox"/> Waste Oil <input type="checkbox"/> Bilges			
*Pre-boomed? Yes: <input type="checkbox"/> No <input type="checkbox"/>			
Comments:			

New Oil Transfer

Reporting Party	<input type="text" value="Ecology HQ"/>		
Company*	<input type="text"/>		
Start Date (mm/dd/yyyy)*	<input type="text"/>	Start Time (hhmm)*	<input type="text"/>
Duration(hrs ##.##)*	<input type="text"/>		
Berth Location	<input type="text"/>		
Anchor Location	<input type="text"/>		
City of Transfer*	<input type="text" value="--Select--"/>		
Address*	<input type="text"/>		
Deliverer Type*	Vessel <input checked="" type="radio"/> Facility <input type="radio"/> Mobile <input type="radio"/>		
Deliverer*	<input type="text"/>	<input type="text"/>	<input type="button" value="Search"/>
Receiver Type*	Vessel <input type="radio"/> Facility <input checked="" type="radio"/>		
Receiver*	<input type="text"/>	<input checked="" type="checkbox"/> Regulated?	
Transfer Type*	<input type="text" value="--Select--"/>	Product*	<input type="text" value="--Select--"/>
Quantity*	<input type="text"/>	Unit*	<input type="text" value="--Select--"/>
Pre-boomed	<input type="checkbox"/> Yes		
Transfer Rate	<input checked="" type="checkbox"/> > 500gpm		
<p><b>NOTE: Rate A deliverers (&gt;500gpm transfer rate) must complete the Boom Report information below. If the information cannot be completed at this time, then you must complete it prior to the transfer via the ANT History screen by clicking the "Detail" button.</b></p>			
<b>Boom Report - Environmental and Safety Conditions Summary:</b>			
Wave Height (ft):	<input type="text"/>		
Sustained Winds (knots) :	<input type="text"/>		
Wind Direction:	<input type="text" value="--Select--"/>		
Current Velocity (knots):	<input type="text"/>		
Safety Issue(s):	<input type="text"/>		
Other factors:	<input type="text"/>		
Remarks	<input type="text"/>		

\* - Indicates required fields

## **BUNKERING OPERATIONS**

### **Enclosure (3) -- QUICK REFERENCE GUIDE REGARDING BUNKERING CONTAINER VESSELS DURING CARGO OPERATIONS**

1. Vessels contract for bunkers
  - Oil Companies notify barge operators
  - Agents coordinate delivery notifications with barge operators and terminals
  - Bunker Barge arrival time and duration of pumping is established
  
2. Vessel Arrives for Cargo Operations
  - Agent coordinates bunker barge arrival
  - Terminal plans operations
  - Cargo Flow Sheet (CFS) or Crane Letter of Operations (CLO) is prepared
    - Outlines what cargo is to be moved in what sequence
    - Terminal will plan around bunker operations if possible
  - Terminal gives CFS/CLO to Agent to pass to Chief Engineer and tankerman
  
3. Bunker Barge Arrives for Bunker Operations
  - Optimal placement of the barge to minimize exposure
  - Vessel ensures “Bunker Operation Sign” is posted at the shore side gangway.
  - Vessel and bunker barge surrounded by containment boom when safe and effective to do so, or deliverer submits Boom reporting Form to WA Department of Ecology and puts alternative measures in place to mitigate impacts of any spill that may occur.
  - DOI is signed by receiving vessel “PIC” and tankerman
  - Tankerman/Chief Mate/Chief Engineer should have a copy of Cargo Flow Sheet or Crane letter (CFS/CLO)
  - Tankerman should understand what cargo adjacent to the barge is to be handled and when
  - Tankerman shall have contact with the vessel superintendent at all times
  
4. Vessel cargo operations commence
  - Lashers sent aboard to unlash containers
  - Crane lowered over hold/hatch to be worked
  - Work commences in accordance with CFS/CLO
  - Lashers sent aboard to re-lash containers
  
5. Bunker operations could start before, during or after cargo operations
  - Tankerman, Chief Mate & vessel superintendent must understand where the stevedore operator is relative to the Cargo Flow Sheet or Crane letter and the bunkering process