

PROJECT SUMMARY

**Bunkering Marine Gas Oil for Esso Exploration
and Production Guyana Limited
in the Exclusive Economic Zone Offshore
Guyana Waters and on the Demerara River**

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Description of Work

These activities would take place in offshore Guyana waters and in the Demerara River as directed by EEPGL. Our vessel are directed by EEPGL to take on a certain amount of diesel fuel from suppliers, SOL and Guyana Shore Base Incorporated located on the Demerara River and pump off certain amounts of diesel fuel to various offshore locations which are floating drilling rigs and FPSO's leased to EEPGL to conduct their business in the Guyana EEZ. The floating drilling rig locations change as they move from one drill site to the next inside the Guyana EEZ as approved by the appropriate Guyanese Authorities. The FPSO's are moored in certain approved locations in the Guyana EEZ by the appropriate Guyanese Authorities.

What follows is the actual process in writing of what is done and how to accomplish the bunkering task.

FUEL OIL TRANSFER PROCEDURES

This fuel oil (F.O.) transfer procedure is prepared in accordance with 33 CFR 155.750. It is a requirement for the vessel personnel to use this transfer procedure for each transfer of F.O. to (Loading), from (Off-Loading), and within the vessel (transferring). This procedure is to be kept in a place where it can be easily seen and used by members of the crew when engaged in transfer operations. Any exemptions or alternatives granted must be placed in front of the transfer procedures.

1. Fuel Oils Transferred - Description and Safety Precautions

Diesel Oil (D.O.) is a light brown, non-viscous liquid that has an odor similar to kerosene. It has a flash point between 110 and 190 deg F and an autoignition temperature of 494 deg F. D.O. is both a skin and eye irritant. Safety precautions should be taken when handling, such as wearing protective gloves and glasses. Keep sparks, flames and other sources of ignition away. In case of a leak or spill, notify personnel on notification list in part (9) of this procedure. When large spills occur evacuate area and remove all sources of ignition. In case of a fire (class B) isolate hazard area and begin extinguishing the fire with the use of carbon dioxide, dry chemical, foam, or water fog. Direct application of water or foam to a pool of D.O. can cause frothing and thereby increase the fire.

2. Fuel Oil (F.O.) Transfer System

The fuel oil transfer system can be arranged to load from the on deck fuel oil fill/discharge connection, off-load fuel oil from the on deck fuel oil fill/discharge connection or from the rig fuel oil discharge connection or transfer fuel oil between the various tanks within the ship.

Transferring

The fuel oil cargo pump is used primarily for transferring fuel from the vessel to offshore drilling rig installations. The fuel oil transfer pump is used primarily for transferring fuel oil between the various fuel oil tanks within the vessel. The procedure for transferring fuel oil to and from any combination of two (2) different tanks is as follows:

1. Ensure the F.O. pumps are off
2. Ensure the following valve line-up is correct and performed in the order given before beginning any transfer (valves are referenced on the system diagrams onboard each vessel):
 - a) Close the following valves:
 - 1) All F.O. tank fill valves,
 - 2) All F.O. tank suction valves,
 - 3) F.O. transfer pump discharge valve(s) for deck connections
 - b) Open the following valves:
 - 1) Appropriate F.O. tank suction valve for tank being transferred from (including appropriate tank valve)
 - 2) F.O. transfer pump suction valve from suction header
 - 3) F.O. transfer pump discharge valve to fill header
 - 4) F.O. meter inlet and outlet valves (if required)
 - 5) Appropriate F.O. tank fill valve for tank being transferred to (including appropriate tank valve)
3. When communication is established (via sound powered phone, intrinsically safe VHF, or other acceptable means) and the personnel are in their proper positions in accordance with the rest of these procedures - transferring may begin at the order of the person in charge to begin pumping. Inspect entire line-up for leaks after pumping is started.
4. When transferring is complete the system should be secured in accordance with Transfer Completion referenced below

Loading

The fuel oil transfer piping system is designed to allow either simultaneous or individual loading (filling) of any combination of the various fuel oil tanks within the vessel from the main deck fuel oil fill/discharge connections. The procedure is as follows:

1. Ensure the F.O. pumps are off.
2. Ensure the following valve line-up is correct and performed in the order given before beginning any transfer (valves are referenced on the system diagrams onboard each vessel):
 - a) Close the following valves:
 - 1) All F.O. tank fill valves,
 - 2) All F.O. tank suction valves,
 - 3) F.O. meter inlet and outlet valves
 - 4) F.O. transfer pump discharge valve for deck connections
 - b) Open the following valves:
 - 1) Appropriate F.O. tank fill valve(s) for tank(s) being filled (including appropriate tank valves)

- 2) F.O. fill valve from deck connection
- 3) Main deck F.O. fill/discharge connection and flange - being ready to catch any fuel still in the pipe with a bucket and making immediate hose connection with gasket.
3. When communication is established (via sound powered phone, intrinsically safe VHF, or other acceptable means) and the personnel are in their proper positions in accordance with the rest of these procedures - transferring may begin at the order of the person in charge to begin pumping. Inspect entire line-up for leaks after pumping is started.
4. When loading is complete the system should be secured in accordance with Transfer Completion referenced below

Off-Loading

The fuel oil transfer pumps are capable for simultaneous or individual off-loading to an offshore drilling rig installation of any combination of the various fuel oil tanks within the vessel or in the event of dry-docking of the vessel and it is needed. The procedure is as follows:

1. Ensure the F.O. pumps are off.
2. Ensure the following valve line-up is correct and performed in the order given before beginning any transfer (valves can be referenced on the system diagram after this procedure):
 - a) Close the following valves:
 - 1) All F.O. tank fill valves,
 - 2) All F.O. tank suction valves,
 - 3) F.O. meter inlet and outlet valves
 - b) Open the following valves:
 - 1) Appropriate F.O. tank suction valve(s) for tank(s) being transferred (including appropriate tank valve)
 - 2) F.O. transfer pump suction valve from suction header
 - 3) F.O. transfer pump discharge valve to appropriate deck discharge connection
 - 4) Main deck F.O. discharge connection - being ready to catch any fuel still in the pipe with a bucket and making immediate hose connection with gasket.
3. When communication is established (via sound powered phone, intrinsically safe VHF, or other acceptable means) and the personnel are in their proper positions in accordance with the rest of these procedures - transferring may begin at the order of the person in charge to begin pumping. Inspect entire line-up for leaks after pumping is started.
 4. When off-loading is complete the system should be secured in accordance with Transfer Completion referenced below

3. Personnel Requirement for Fuel Oil Transfer

For loading and off-loading of fuel oil, a minimum of one person in charge and two transfer personnel are required to be on duty for the entire duration of the operation.

For transferring of fuel oil between the tanks within the vessel a minimum of one person in charge and one transfer personnel are required to be on duty for the entire duration of the transfer operation.

4. Duties of Required Personnel for Fuel Oil Transfer

Duties of Person in Charge

The person in charge is designated by the operator and shall hold a valid license as a master, mate, pilot, engineer, or operator. The person in charge will generally be attending duties in the pilothouse but may be temporarily below deck as required. In the event that the person in charge is not in the pilothouse, a designed person with communications capabilities must be in the vicinity of an emergency shutdown switch. The person in charge is responsible for seeing that the following is accomplished:

- 1) Assume responsibility for the vessel in filling out the declaration of inspection before commencing transfer operations. All items on this declaration must be fully understood and agreed upon by the deliverer and recipient of cargo and any discrepancies will be noted in writing.
- 2) Read, understand, and follow this procedure.
- 3) Expedite transfer of fuel oil without causing any damage to the vessel, its equipment or environment.
- 4) Constantly watch for any changes in condition that could cause any spill.
- 5) Notify the proper person(s) in case of a spill. The procedure for spill reporting is found in part (9) of this procedure.
- 6) Proper tending to the vessel's moorings as specified in part (5).
- 7) Take charge of all topping operations as specified in part (7).
- 8) Properly secure vessel and equipment upon termination of transfer as specified in part (10).
- 9) Remove all spillage from containment boxes as specified in part (8).
- 10) Instruct and direct the transfer personnel.

Duties of Transfer Personnel

The person in charge designates the transfer personnel. Acceptable transfer personnel shall include; persons designated by the person in charge, qualified deck hands, AB/OS, or qualified crew. Passengers or persons other than crew will not be acceptable for use as transfer personnel. For loading and off-loading one-transfer personnel will be located at the appropriate deck connection and another transfer personnel will be located in the engine room attending the transfer equipment. For transferring operations (within the vessel) it is not necessary to have a transfer personnel located on deck. The transfer personnel are responsible for seeing that the following is accomplished:

1. Follow instructions of the person in charge.
2. Maintain communication with the person in charge.

3. Initiate an emergency shut-down to stop the transfer operation whenever oil or hazardous material from any source is discharged:
 - a. In the transfer operation work area; or
 - b. Into the water or upon the adjoining shoreline in the transfer area.
4. Immediately report any spills or leakage or potential hazards to the person in charge.

5. Mooring Duties for Oil Transfer

Deck Officer on Watch - In charge of tying up and letting go of mooring. Insure proper signals hoisted or lit aloft and scuppers plugged.

1. Bosun, AB's, & OS's - Assist as directed in mooring. Rig ladder during ship to barge operations if applicable

6. Emergency Shut-Down

For loading, immediate means of communication with the fueling facility must be made available in order to request that the pumping be stopped if an emergency shutdown were to become necessary. If loading from a barge, an emergency stop switch should be given to the vessel by the barge unit.

For off-loading fuel from the ship or transferring fuel within the ship, immediate communication with the transfer personnel attending the transfer equipment is necessary in order to request that the pumping be stopped and appropriate valves be closed. In the event that an emergency shut down is necessary, appropriate personnel must activate the shut-down. An emergency stop button for the pumps is located on the control panels. These control panels are located in the pilothouse, near the liquid mud and fuel oil fill connection on main deck, and on the local pump control panel.

The person in charge must be able to maintain communication with the barge or shore side fueling facility and transfer personnel via voice, sound powered phone, or portable radio. If portable radios are used they must be intrinsically safe as defined in 46 CFR 110.15-100 and 46 CFR 11.80.

7. Topping Off

During topping off operations, the flow shall be continually reduced to a level that will allow controlled closure of the discharge valve to that tank and precludes overfilling or spillage. The tanks shall be continuously sounded to ensure tank levels during the topping off phase and continuous communication between the transferring and sounding personnel must be maintained. This phase of the transfer procedure is the most critical and requires the full attention of the person in charge.

8. Transfer Completion

Once the transfer is complete: all pumping is stopped, all fill valves are closed, all connections drained and removed, and blank flanges replaced and secured with gaskets. The person in charge visually checks all valves and flanges to be sure they are closed after the oil transfer is complete.

Emptying of the Discharge Containment Areas

Containment areas are to be drained and cleaned so as to prevent any oil from spilling overboard. This is to be done by using a hand pump, rags, and/or absorbents. Collected spillage shall be properly disposed of to prevent any rerelease because of torn bags or faulty containers. In addition to the required fixed containment area, at each oil tank vent, overflow, and fill pipe a 5 gallon portable container and rags should be placed to clean and collect any oil that might have spilled.

9. Accidental Oil Discharges

AS SOON AS A SPILL IS SIGHTED, IMMEDIATE ACTION SHALL BE TAKEN TO STOP OR REDUCE THE SOURCE. REFER TO THE SHIPBOARD OIL POLLUTION EMERGENCY PLAN.

10. Closing and Opening the Vessels Openings

The person in charge is to ensure that the vessel is properly secured and equipment stowed upon transfer completion. This includes, but is not limited to:

1. Dogging of all hatches, ullages, doors vents, sounding ports, and any other vessel openings that maintain the seaworthy condition of the vessel and prevent the inadvertent release of oil or hazardous material in the event of an accident.
2. Securing booms, cargo hoses and any other gear that is not permanently fastened to the hull that might move while the vessel is underway.
3. Closing of all fuel valves necessary to prevent shifting of fuel.
4. Remove all spillage from containment boxes using rags or sugie cloth to soak up excess oil.

11. Transfer Hose Markings

Hoses used for the transfer of hazardous materials are to be marked or stenciled as follows, with:

1. The name of the product for hose intended service.
2. Maximum working pressure.
3. Minimum service temperature for service at other than ambient temperature.
4. Manufacture date.
5. Date of latest possible pressure testing in accordance w/ USCG 33 CFR 156.170.