

EDC BARGE AND SHIP LOADING PROCEDURE

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Ethylene Dichloride (EDC) is a flammable product. Prior to loading EDC, you must be knowledgeable in procedures and regulations pertaining to EDC. This section describes the procedures used at the PPG, Lake Charles Complex. You must also refer to the procedures outlined in "PPG Standard Barge Loading, All Barges" and the Code of Federal Regulations (46 CFR Subchapter O). Key references are shown below:

46 CFR Subchapter O, Part 151.05 Minimum Requirements

Cargo Tanks (Vents) - 46 CFR Part 32.55-25 (A-B)

Cargo Tanks (Vents) - 46 CFR Part 32.55-30 (C)

Flammable Liquid - 46 CFR 30.10-22

Flame Screen - 46 CFR 30.10-25

EDC is a grade C flammable liquid. The Chemical Data Guide extinguishing agents for EDC are CO₂, dry chemical, foam, and water fog.

Hands-on-training in shore tank arrangement, piping system and valving will be given in the field by a qualified trainer. Classroom training will consist of a review of the Code of Federal Regulations books, Chemical Data Guide and PPG training manuals.

There is a special requirement with EDC pertaining to the person in charge (PIC) of an EDC transfer. Since EDC is a flammable product, the Code of Federal Regulations (46 CFR 151.45-4) requires a certified tankerman to be in charge of the barge during loading. Therefore, at PPG Lake Charles, a Coast Guard certified Lead Tankerman will be in charge of EDC loading on all barges. All Lead Tankermen are required to complete a Coast Guard Tankerman test to become certified. In the case of EDC transfers to a ship, the ship's master or mate will serve to meet the requirement of the licensed PIC, so a Lead Tankerman would not be needed.

EDC barge loading can be done at either Docks "A" or "C". EDC ships can be loaded at either Docks "A" or "C".

Following is a step-by-step procedure for loading EDC. Where noted, T.V. will apply to Tank Vessels (ships) and T.B. will apply to Tank Barges.

Pre-loading and Inspection Requirements

1. (TB) Spot the barge. Barges to be loaded at "A" dock will normally be spotted by contract tug.
2. (TB/TV) Obtain the shore tank number from the Shift Foreman or Day Foreman. Notify the foreman, when ready, if a surveyor is specified so he can be called out.
3. (TB) Place the gang plank on the barge and secure.

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4. (TB) Complete pre-loading inspection of barge (see 46 CFR 151.45-5). Close sea cock valve and pump stern rake if needed. Call VC II Vinyl Storage Operator (2771) for tank availability.
5. (TB/TV) Gauge the shore tank. In the case of a ship, gauge the shore tank before the ship arrives.
6. (TV) complete the Declaration of Inspection with the ship's representative before hooking up.
7. (TB/TV) Check and apply all warning signs and signals (see 45 CFR 151.45-2 and 151.45-9). Hook up the grounding cable. Using the Certificate of Inspection found in the document tube on the barge, determine the number and type of fire extinguishers to be used on the barge. Place one near pump area and one centrally located toward the opposite end.
8. (TB) After inspection thru cargo hatches, (inspection - sampling of heel, etc.) cargo hatches must be closed. During loading, ullage hatches must be covered with flame screens except when gauging. (See 46 CFR 151.45-2; c-d)
9. (TB/TV) Hook up the loading hose. Locate and identify all loading pump kill switches and automatic valve shutdown switches. These are located on the handrail near the Loading Control Room.
10. (TB/TV) Once the loading hose is hooked up, check the automatic valve operation before starting transfer.

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11. (TB) Line up the barge piping. The PIC of the ship will line up the ship's piping.
12. (TB/TV) Make sure the dock loading valve and vents on the loading hose and piping are closed.
13. (TB/TV) Line up the shore tank piping from the docks to the tank. Complete required tagging procedures. Check to be sure the tanks have been gauged and record the tank temperature. When loading a barge, be sure the stern rake is pumped out before transfer begins.

Loading

1. (TB/TV) Begin transfer via gravity flow. Once flow is verified and no leaks detected on hose or barge connections, start pumps.
2. (TB/TV) Check the piping from the dock to the shore tanks for leaks. If leaks are detected, shut down and correct the problem.
3. (TB/TV) Resume loading. On a multi-tank barge, control the flow to the tanks to keep the barge level.
4. (TB) Adjust mooring lines during loading as needed. Continue checking dry compartments for leaks throughout product transfer. Follow the topping off procedures described in "Standard Barge Loading, All Barges."
5. (TB/TV) Obtain a line sample. When loading a ship, the surveyor will complete all sampling and gauging with you.

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6. (TB) When barge loading is complete, clear the loading hose and barge lines into the barge before leaving the dock area to gauge the shore tanks. Gauge tanks and record.
7. (TV) When ship loading is complete, clear loading hose from the automatic valve to the ship's tank.
8. (TB/TV) Gauge the barge or ship. Disconnect the loading hose and grounding cable.
9. (TB) If the stern rake was pumped out, be sure the pump is removed from the barge.
10. (TB) Make sure all cargo hatches, ullage hatches and dry compartment hatches are closed and secured for shipment.
11. Remove fire extinguishers from the barge.
12. (TB/TV) Complete loading and inspection forms. Secure the boom line to the dock, police the dock and lock the gate.
13. (TB/TV) Take samples and the original copy of the loading form to the lab.
14. Blow line from dock back to shore tank to get air pad on line so that it will not be liquid full and build up pressure.

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