

CAUSTIC BARGE LOADING PROCEDURE

CAUSTIC BARGE LOADNG

As the person in charge of the dock facility, you must be informed on the proper procedures and regulations. This task detailing gives an overview of caustic barge loading. It is necessary to refer to the procedures outlined in "PPG Standard Barge Loading for All Barges" before reading this procedure. Refer to the Code of Federal Regulations 46, CRC subchapter O, Part 151 for Federal regulations covering the transfer of caustic.

1. Determine what grade of caustic (ET-50, MC-50 or E-50) to be loaded, which tanks are to be used, and at which dock the material is to be loaded.
2. If loading at "C" dock, check the caustic sump level. If it is not empty, pump it down before beginning the transfer operation. Reset the caustic sump high level alarm.
3. Spot the barge and complete the pre-loading inspection. This should include the pumping of water from the stern rake and any material from the drain pans.
4. Have the foreman notify the surveyor, if one is needed.
5. Place the gang plank on the barge and secure it with rope or chain. Hook up the appropriate loading hose.

6. Contact the PELS(R) lead operator to get final approval as to which tank to load from. Line up barge and shore piping and tag as necessary. If the loading occurs between October 1st and April 1st, the caustic tanks used must be 120oF or greater before loading if the barge is to go north of St. Louis, Missouri. In addition, do not load any uninsulated barge during winter months for anywhere but the Gulf Coast.
7. Check the fuel tank level on the barge, add fuel as necessary. Check engine per instructions in "Standard Barge Loading Tank Detailing, All Barges".
8. Open the air bleed valve at the docks and open valves at the tank to begin gravity flow and bleeding air from the loading line. Stand by at the air bleed valve and close it as soon as the first sign of caustic appears.
9. Open the valve on the barge to establish gravity flow into it. Once flow is confirmed, open the pump bypass valve wide open and then start the pump. Close bypass valve slowly.
10. Once loading has begun, start the continuous line sample.
11. Adjust the mooring lines on the barge as necessary, throughout the loading period. Check the condition and positioning of the hose during loading.
12. Adjust the flow to individual tanks to keep the barge level if it is a multi-tank barge. On multi-tank barges, watch

for siphoning from one tank to another.

13. Load all barges by ullage (level inside dome) as well as draft. Check the wing ,stern and bow compartments for leaks during the loading operation.
14. Run diesel engine on barges at least one hour while the barge is being loaded.
15. When the loading is near completion, shut off the pump and top off the barge via gravity flow. If the level of caustic in the shore tank is too low for gravity flow, leave the pump on and control the flow by pinching back on the dock valve. Have one person stand by the pump switch during this procedure. Call the leadman if you need help. See #8 under Loading in the Standard Barge Loading section for details on specific barges.
16. Take off the continuous line sample a little before loading is completed.
17. When loading is finished, cut off the pump if it is still running and then slowly close the dock valve. Never close loading valve with the pump running. Clear the loading hose into the barge using air or nitrogen. Close all valves on the barge, bleed any pressure off the hose, and disconnect the hose from the barge.
18. Blind off all barge piping and the dock loading hose.
19. Sample the barge tanks. On an ET-50 barge, take one sample. Take one sample from each dome on MC-50 barges.

- Take one sample from each tank on a multi-tank barge.
20. Secure all domes and gauge hatches. Gauge the shore tank, pull your tags and secure shore piping. Notify the PELS(R) Lead Operator that you are through with the tank.
 21. During cold weather when temperatures are staying below 60oF, the caustic lines must be cleared to keep them from freezing. Refer to the next section, "Caustic Loading Line Clearing Procedure" for special instructions when loading from Tanks 108, 109, and 110. When loading from any of the old south dock tanks, E or ET-50 101,102,103,104,106,107 or MC-50 201,202 or 203, the loading line should simply be drained to the "C" Dock Sump. The sump should be pumped out as you are draining the line, but it should be checked to make sure the automatic level control is working. If the pump is is not working, the sump could overflow to the river and cause environmental problem.
 22. While draining caustic lines from old south dock tanks the vents should be open at pump suction and at the end of the docks. After draining is completed MAKE SURE THE VENT LINES AT THE END OF THE DOCKS ARE SHUT OFF.
 23. NOTIFY the PELS(R) Lead Operator before draining any caustic lines at "C" dock or at Tanks 108, 109, and 110.
 24. Complete the loading and inspection form and tag all samples. Take the samples and the original copy of the form to the Lab.