Personnel responsible:
Material Handler and Lead Operator

Safety:
Safety shoes and safety glasses are required when working in the plant. Ensure all hoses and couplings are working because the Liquid Loading system uses compressed air to clean lines.

Summary:
The Giles Liquid Loading System uses a mass flow meter for controlling the percent MgSO4 and the total weight of a liquid load. Most operator effort is making sure the hoses are connected to the proper place and the right information for the load is entered into the Monitoring System.

Procedure:

Data Entry

1. Go to the "Liquid Load" screen on the Monitoring System
2. Click on "Operator Initials", type in your initials, and press ENTER.
3. Click on "Load Number", type in the load number, and press ENTER.
4. Click on "Percent MgSO4", enter the percent using the popup, and click OK.
5. Click on "Load Weight (Pounds)", enter the load weight in pounds, and click OK.

Setup

6. Ensure the small press is ready for use, the plates are aligned, and the Liquid Loading System control panel has the green "Ready" light on.
7. At the hydraulic unit, push the position valve away from the press, open the safety valve and press the paddle switch.
8. Pump the press up to 4000 psi.
9. Release the paddle and immediately close the blocking valve.
10. Ensure a hose is connected to the Liquid Load pump from the Brine Storage Tank.
11. Ensure a hose is connected from the Liquid Load pump to the Small Press Line.
12. Ensure a hose is connected from Small Press Line to the left side of the 3-way press valve.
13. Ensure small press valve is turned with yellow handle to the right.
14. Connect the hose to the load line.
15. Connect a hose from manual 3-way valve to the Mother Liquor Tank line (hose on right side)
16. Ensure 3-way valve is lined up to deliver the load waste to the Mother Liquor tank (valve handle in middle)
17. Ensure Load Hose is securely in the truck hatch and that the air valve is off, if equipped.

Starting the Brine

18. Open the valve on the Brine Storage Tank, to feed brine to the Liquid Load Pump.
19. Start the Liquid Load Pump.
20. Ensure the Water Control Valve blocking valves are open.

Loading

21. When product is going through the system and bypassing to the Mother Liquor Tank, press the green "Start Load" button on the Liquid Loading System control panel.
22. The Bypass Valve should shift to the Load Line and the "Loading" light should come on.
23. Watch the system for leaks, and verify the information on the Monitoring System is correct – it can be changed while the load is in progress.

24. When the load is finished, an Alarm will sound and "Stop the Pump and Close the valve" light will come on.

Backwash

25. Stop the Liquid Load Pump, and close the Brine Storage Tank Valve.
26. Presses "Start Wash" button on the Liquid Loading System control panel.
27. Press will automatically backwash until density drops, then it will blow out line to ML tank.
28. Wait until the "Ready" light comes on before getting ready for the next load.

Finish

1. Partially open the manual 3-way valve to relieve any pressure on the Mother Liquor line.
2. Drop the line to the Mother Liquor tank so any residual liquid can drain.
3. Drop the load line so it can drain any residual liquid.
4. Close the drain valve.
5. Relieve the pressure on the little press so it can drain by opening the blocking valve and turning the handle to the opposite side on the hydraulic unit.

Emergency Stop

1. If for any reason, you need to stop the load, press the red "Manual Stop" button on the liquid loading control panel.
2. Continue the backwash sequence starting at step 25.

TRAINING DOCUMENTATION

	EMPLOYEE	TITLE	SIGNATURE	DATE
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Revision Number	Revision Date	Revision Author	Revision Description
00	6/12/2007	Patrick Owen	Original Document
01	12/9/2008	Patrick Owen	Revised for sock filter use
02	5/5/2009	PLO	Revised to drop lines
03	6/11/2009	PLO	Revised for small press use again