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	COMPANY PROCEDURE		
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Personnel responsible:

1. Material Handler

Safety:

Before approaching the Tank Car or Truck containing Sulfuric Acid put on the following Personal Protective Equipment: Safety Goggles, Face Shield, Rain Suit, and Rubber Gloves

The warning sign (blue) must be in place during unloading.

Giles lock must be on track derail before hooking up cars.

Summary:

This section provides specific directions for unloading Sulfuric Acid, a hazardous chemical. Employees are carefully trained prior to proceeding with any unloading tasks. Do not unload acid unless there is room in the tank for it.


Procedure:

Prepare for Unloading and Refilling

1. Make sure that the storage tank to receive the acid shipment can accommodate the contents of the rail car. (No more than 14,000 gallons in a tank to receive a full car)
2. Ensure that there is no pressure on the tank to be filled.
3. Open the dump valve to the storage tank to be filled.
4. If swapping tanks is necessary, refer to the acid tank procedure.
5. Inspect all ports on the storage tanks to make sure they are secure.

Obtain an Acid Sample

1. Obtain the special dipstick used for sampling an acid car, and a sample bottle, both provided at the Material Handler's Desk.
2. Make sure wheels are Blocked or Chocked.
3. Assure the derail and caution signs are in place.
4. Assure derail lock is in place
5. Put on safety equipment before going up on the car.
6. Check the hatch to make sure the Load Seal is intact. If it is not, inform the Safety or Plant Manager. Do not unload the car until told to do so. The acid may have been tampered with.
7. Check the safety vent (rupture disk) to insure the cap is intact.
8. Carefully depressurize the car by slowly removing the air inlet plug and opening the air valve.
9. Remove the sample bottle cap, put it aside, and screw the bottle firmly into the perforated bottle cap attached to the stick.
10. Ensure the car is fully depressurized.
11. Remove the dump cap and thrust the bottle and stick through and down into the acid, thus filling the bottle.

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12. Retract the bottle carefully.
13. **PREPARE THE CAR FOR UNLOADING**
14. Remove the bottle from the perforated cap, replace the regular cap, rinse the filled bottle and the dipstick with the perforated cap, with water at a tap located nearby.
15. Dry the sample bottle and fill out a self-stick label provided at the Material Handler's bench which will show the Car number, the number of the storage tank used, the date, time, and the Operators number.
16. Wrap the label around the sample bottle and place the bottle in the designated spot on the Material Handler's bench.
17. Acid resistant gloves are to be worn the entire time of handling sample bottles.

Prepare the Car for Unloading

1. Check the unloading hose and fittings for damage or wear.
2. Remove the plug from the discharge hose.
3. Check the gaskets on the quick-coupling on the discharge hose. Replace if necessary.
4. Check bolts on load hole and tighten if necessary.
5. Connect the Discharge pipe to the discharge port of the Acid car.
6. Connect the unloading hose to the discharge port on the tank.
7. Coat the threads of the air inlet pipe with Teflon paste or tape.
8. Connect the air supply hose to the tank car air inlet port

Transfer Acid to the Storage Tank

1. Check the acid transfer line at the storage tanks to assure that the acid will go to the proper storage tank.
2. Open the valve on the air supply line to pressurize the car. (20 psi).
3. When acid is moving through the line (you can tell by the weight), start the acid offloading pump.
4. Do not run the pump if no acid is in the line. Running the pump dry will destroy it.


WARNING: Never pressurize the car to more than 30 psi – 20 psi is preferred to unload with the pump

Attend the Unloading

Continuously check the acid transfer line for leaks.

If a leak occurs – **immediately do the following.**

1. Close the valve on the air supply line before the regulator
2. Open the air bleed off
3. Wait for the leak to subside as the pump pulls a vacuum
4. Close the rail car acid valve
5. Stop the acid unloading pump
6. Carefully open the vent valve on the top of the rail car and slowly depressurize the car.
7. Notify the Safety and/or Plant Manager
8. Neutralize the spill(s) with lime.
9. If only a small spill, large quantities of water may be used, but only at the direction of the Safety or Plant Manager.

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10. After the leak has been repaired check the entire system, as above, before resuming the unloading.


Complete the Unloading

The acid pump will stop and rushing air in the acid line indicate that the acid is out of the car.

1. Leave the air on for a few minutes to clear the lines of remaining acid.
2. Close the air supply valve
3. Close the acid outlet valve on the tank.
4. Depressurize the tank car by opening the vent valve on the top of the tank.
5. Disconnect the air supply hose.
6. Disconnect the acid line and carefully lower to the ground
7. Replace the plugs in the acid unloading hose and the air supply hose.
8. Go inside and turn off the acid unloading pump disconnect.

Prepare the Acid Rail Car for Release to the Railroad

1. Inspect the hatch cover gasket for damage and replace it if necessary.
2. Replace the eductor pipe cap and tighten it with the chain in place.
3. Replace the air inlet plug and tighten it with the chain in place.
4. Confirm that the rupture disk assembly is intact.
5. Store all hoses and couplings on the storage racks, clear of the siding and rail cars.
6. Check the general condition of the rail car, (ladders, hand rails, platforms, etc.), and report any problems to the Plant Manager.
7. Remove the wheel chocks and the warning sign.
8. Notify the appropriate personnel that the car is ready for release.

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REVISION HISTORY

<u>Revision Date</u>	<u>Revision Number</u>	<u>Revision Description</u>
02/06/06	0	New Document
11/30/06	1	Adding safety
03/27/07	2	Added (5) Eyewash Station check & (5) discharge pipe connection
9/11/2007	3	Added acid unloading pump and updated for acid tank pump