

Ethanolamines/Glycol Ethers Tier 3 Procedure

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Title: Cooling Tower Water Failure
References: Glossary Of Equipment Identification (Text # 114)

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1122. Cooling Tower Water Failure

1.0 Objective:

- 1.1 To provide a guide to the actions that should be taken in the event of a cooling tower water failure. To execute this procedure in a manner that prevents personnel injury and environmental damage.

2.0 Responsibility:

- 2.1 It is the responsibility of the operations supervisor and the senior operations specialist to ensure that this procedure is utilized in the event of such a loss.
- 2.2 It is the responsibility of the senior operations specialist and the operations specialist to ensure that this procedure is executed in a safe and efficient manner.

3.0 Special Notations:

- 3.1 Emergency procedures are written with the intention of having in black and white what procedure should be followed under ideal circumstances. They do not take the place of common sense. If we have a fire, we have a fire department to handle it. Don't tackle something that could injure you because you don't have the experience or training to handle it. Small fires in trash cans or some insulation fires can be handled by most of us. Don't wind up making the problem worst by getting hurt or rushing in and doing the wrong thing. The same thing applies to spills and other emergencies.

-----use common sense-----

4.0 Board Person:

- 4.1 Trip the oxide to the glycol ethers and ethanolamines plants. (TS-2086-amines, HS1054-glycol)
- 4.2 Keep the alcohol and ammonia flowing as long as possible, watching T-110 and T-220, to clear reaction.
- 4.3 Announce the emergency over the intercom and sound the emergency horn.
- 4.4 Energize the emergency trips on both plants.

- 4.5 Switch T-110 bottoms to DV-113/114.
- 4.6 Have an operations specialist put process water on C-550's as soon as possible. Restart should they have tripped on low water pressure.
- 4.7 Lower R-201 shell pressure to it's lowest possible value.
- 4.8 Have an operations specialist put process water on E-201a if necessary.
- 4.9 Have an operations specialist put process water on the air conditioner on the control room roof. Restart should it have shutdown.
- 4.10 Put oxide, alcohol, ammonia, catalyst and acid controllers in manual and close.
- 4.11 Block in T-250 and T-115/120 feed, all overheads, bottoms, and steam to E-110, E-115/E-120, E-130, E-140, E-220, E-230, E-240, E-250, E-260 and E-270-1 and close steam valves to R-101/102.
- 4.12 Block in pressure controllers.
- 4.13 Block in all rerun and recycle flows.
- 4.14 Coordinate actions of both operations specialists
- 4.15 Call glycol one and two to communicate problem.
- 4.16 Close dD-210 vent controller and T-211 overheads.
- 4.17 Call the plant superintendent as time permits.

5.0 Outside and Lab Operators:

- 5.1 Make sure Sundynes are shutdown and blocked in.
- 5.2 Block in all transfers.
- 5.3 Block in T-211 overheads.
- 5.4 Block in the ammonia vent controller from D-210 to T-211.
- 5.5 Shutdown P-500's if necessary.
- 5.6 Shutdown FN-500's.
- 5.7 Shutdown pumps and block in chemicals to the cooling tower.

- 5.8 Manually block in overheads, bottoms and steam to all distillation towers and shutdown pumps that would be dead headed. If bottoms pumps circulate back to a reboiler, leave them running.
- 5.9 Block in the ejector to each tower and then block in the steam to the ejector.
- 5.10 Add nitrogen to the towers on instructions slowly.
- 5.11 Block in then shutdown VP-240, VP-110 and VP-115 or VP-120 depending on what series we are on.
- 5.12 Get a radio before going out to the field if possible.

6.0 Revisions:

Revision No. 1	07-01-92	Section 1122.1.1 changed to reflect environmental concerns.
Revision No. 2	07-15-93	Yearly Review
Revision No. 3	12-22-94	Yearly Review
Revision No. 4	1-23-96	Changed Titles