



DOW CHEMICAL U.S.A.

March 31, 1988

LOUISIANA APPLIED SCIENCE AND
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REACTIVE CHEMICALS COMMITTEE REVIEW - MARCH 24, 1988

PROJECT: Ethylene Recovery Unit at Glycol II - Capital Authorization

PROJECT REPS: Hal Martin, John Pendergast

COMMITTEE PRESENT: Gathers, Mitchell, Bailey and Brookins (Monroe),
Cochran

GUESTS: Steve Milligan, Marcus James (Glycol II), Wally Bounds (Tech
Center), Fred Lochary (AS&TL)

CONCERNS:

1. Confirm the literature flash point for Norpar 12 by testing in LAD.
2. Obtain ARC data on Norpar, catalyst and O₂ to determine reactivity.

Please respond in writing to the Committee Chairman within one month as to action taken or planned in regard to these concerns.

Jack Gathers
for J.Y. Pennington, Chairman
REACTIVE CHEMICALS COMMITTEE

rcb

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DECEMBER 3, 1987

JOAN PENNINGTON
REACTIVE CHEMICALS COMMITTEE
BLDG 2510

CC: Wayne Turner	- 5301	Doug Merrick	- 2502
Donna Carville	- 6803	Charles Almond	- 3801
Paul Rozas	- 2306	Dave Courter	- 2501

PROJECT: ETHYLENE RECOVERY PILOT PLANT AT ~~GLYCOL II~~ II.

RE: CONSIDERATIONS OF THE REACTIVE CHEMICALS REVIEW OF
OCTOBER 29, 1987

Six of the seven considerations from the reactive chemicals review either have been done or will be done in the near future.

1. Determine the fate of acetulene if introduced in the feed gas: will it concentrate in the Norpar 10?

The simulation to determine the fate of acetulene in the system will be done as soon as the simulation has been fine tuned to accommodate steam stripping. The fine tuning of the simulation is currently being done by John Pendergast.

2. Determine the effect of varying ethylene concentration in the feed on the flammability of the stripper overhead.

As the ethylene in the feed increases the concentration of oxygen will decrease due to the dilution effects from the ethylene. Therefore, as the ethylene is increased, the flammability of the stripper overhead stream will decrease because the oxygen concentration will be smaller. Oxygen concentration is the critical factor in the flammable characteristics of ethylene, nitrogen, oxygen system in the stripper overhead.

3. Install an oxygen analyzer on the compressor suction to shutdown the system to prevent a flammable mixture in the second stage discharge.

This has been done and has been tested in the pilot plant shutdown logic.

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4. Delay nitrogen EBV on absorber from opening until T-70 pressure is equal to or less than 120 psig.

This also has been incorporated into the shutdown logic and has been tested.

5. Install redundant pressure switch on T-80 stripper overhead for shutdown upon sensing a vacuum.

A vacuum switch has been install on T-80 overhead. Since oxygen in the feed to C-1002 is the worst case scenario, the pilot plant has tripple redundancy to protect against this occurrence. The first check is the oxygen analyzer as the last line of defense. The second check is the vacuum switch and the last check is the pressure transmitter on T-80 overhead. All instruments will shutdown the system under the appropriate conditions.

6. Install a redundant level switch on C-1002 to prevent liquid carryover into C-1002 compressor.

This suggestion was determined to unnecessary due to the historical reliability of the Rosemount transmitters in a clean service. Also, major modifications to the vessel would have to be made to accommodate a level switch.

7. Install a high pressure switch on C-1002 discharge to shutdown the compressor in the event of overpressure.

A pressure switch has been installed on C-1002 discharge to shutdown the system when the discharge pressure exceeds 375 psig. The pressure switch has been tested in the system.

If there are any questions regarding the above actions please feel free to call me at 1546 or 1778. Thank you for your suggestions.



Hal Martin
Glycol II Plant Support