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The Dow Chemical Company
P.O. Box 150
Plaquemine, Louisiana 70765-0150

July 13, 1993

Gerald Wagener
Chairman-Reactive Chemicals Committee
Building 2511

xc: Doyle Haney
CMP Reactive Chemical Files

re: Response to June 23, 1993 Reactive Chemical Review of CMP's Chloroform Expansion Distillation and Storage Areas

This letter is in response to the reactive chemical review held June 23, 1993. Two follow up items were developed as a result of the review.

1. Reactive chemicals data is needed for V-1515. What is the heat of adsorption of the M1/M2 product mix on the AW-300 Mole sieve and is there any exothermic activity at elevated temperatures?

RESPONSE:
Samples of methyl chloride, methylene chloride, and AW-300 molecular sieve were analyzed at the reactive chemicals laboratory (test # 93142). The heat of adsorption of methyl chloride gas on the mole sieve was -8 cal/g. The liquid methylene chloride produced no heat from adsorption. DSC tests ran showed no real concerns. CMP feels there are no reactive chemical concerns, aside from normal molecular sieve handling concerns.

2. Calculate the maximum possible chlorine flow to MX-1520 for a scenario involving a stuck open chlorine control valve. Since recent ARC data shows that the reactivity of chlorine and chloroform (ferric chloride added) starts at 71 deg C, a high excess of chlorine in MX-1520 and D-1525 is a concern.

RESPONSE:
CMP will sample D-1525 each shift to monitor for chlorine concentration. The desired concentration will be 10 - 50 PPM. Two safeguards against high chlorine concentrations will exist. (1) The highest potential chlorine flow is relatively small (see next paragraph). (2) High excess chlorine sample results will be acted on for product quality control standpoints well before a reactive chemical situation will occur.

The C_v of the chlorine control valve is 0.16. The calculated highest potential flow through this valve is 93.5 lb/hr. Typical C-1520 bottoms stream flows that the chlorine will mix with should average 35,000 to 45,000 lbs/hr. This is an inlet concentration of 0.26 % chlorine for the D-1525 feed stream. It is not felt that this low concentration will provide a dangerous reactive chemicals scenario.

Please contact me with any further questions you may have.

Kevin J. Kelley
CMP Distillation Area Engineer
Extension 8590