



DOW CHEMICAL U.S.A.

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RE: TYRIN CPE Pilot Plant Reactive Chemical Review

In your letter of July 24th you listed five items for our consideration. Our responses are listed below.

1. As we continue to upgrade and replace components, we will aim toward more uniformity in materials of construction. We have adopted the Dow Engineering Piping Specifications for the services they cover. We are in the process of developing specifications for the services we have that are unique. They should be completed within a month.
2. Our neutralizer caustic addition procedure has been modified so that if the caustic volumetric does not overflow within a minute after the fill valve is opened, all valves are blocked and the cause of the problem is determined.
3. Our caustic storage tank was drained and opened to check the steam coil's material of construction. It was found to be 304SS. It was replaced with Monel 400 (approved by Hayes Barnett).
4. We have added a sampling and analysis section to our caustic receiving procedure in order to make sure that it is caustic we put into our storage tank. A sample taken from the truck will be treated with a mixed indicator. It's color change will indicate whether the liquid is acidic, basic, or neutral. The caustic production plant uses the same indicator to identify heels in trucks prior to loading them.
5. In order to prevent 235 pound steam from entering the vaporizer jacket and possibly causing a chlorine-iron fire, an additional fail-safe steam shutoff system will be added. It will function independently of the existing system. If the inlet to the vaporizer jacket should reach 200°F, a temperature switch will cause an air-to-open valve to close and an alarm to sound. This system will be installed as soon as the temperature switch and valve can be obtained.

Thank you for your time and suggestions regarding the TYRIN CPE pilot plant. We appreciate your expertise and fresh outlook in helping us locate potential problems. If you should have any further questions or suggestions, please do not hesitate to call.

A handwritten signature in cursive script, appearing to read "Jim Akers".

Jim Akers
Elastomers Research

sfw

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