A

To: D. W. Hollis

From: K. W. Birck
Date: January 15, 1986

Interoffice Communication

Subject: VCM PUMP PRESSURE RELIEF - CLASS "A" DESIGN

VISTA

Attached for your review is the Class "A" design for VCM pump pressure relief. This design completes the project to provide thermal relief for all pumps in VCM service when they are blocked in. This is accomplished through a combination of recirculation lines and relief valves. This design takes into account changes being made in the Remote Operated Valve Project (AFE-D5M3).

A project was begun in 1981 to prevent overpressurization of pumps in VCM service by installing relief valves on them. This was in response to the overpressurization of a compressor on February 6, 1981. The project was AFE'd in 1982 (AFE-9851), but put on hold because questions were raised about relief valve discharge pluggage when exposed to liquid VCM.

Further study identified recirculation lines as a better method of protection during normal plant operation. Recirculation lines return a portion of the pumped VCM back to its respective receiver. Recirculation lines have a better chance than relief valves of remaining clear since continuous flow tends to prevent polymerization.

The Remote Operated Valve Project is designed to block in the VCM receivers and sphere during a major release. This removes relief protection for several pumps since recirculation is blocked in. The filter packs also lose their relief protection since their relief valves discharge back to their receivers. This occurs when protection is most likely to be needed.

To remedy this situation, the recirculation loops will be provided with new relief valves. These valves will be located to prevent polymerization at their discharges.

If there are any comments, please direct them to me, extension 2285.

Kenneth W. Birck
Process Engineer

/aeb

cc: JF, JWW, RAF, AHS, REP(2), VEM, RBN, CLW