3/78

Dear Jim,

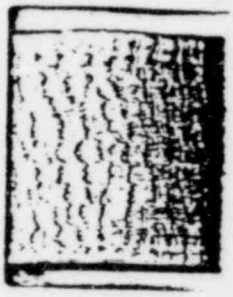
Your evaluation of the 4/23 incident would have been more complete and accurate if mention were made of these items:

① Along with the problem of the stuck-open safeties it should be noted that some safeties did not lift when they should have.

② Flow testing of MU-V-16's completely ignores the fact that MU-V-17/18 are open during ES. This causes runout on the makeup pumps and erroneous flow indications, which mis-lead the operator.

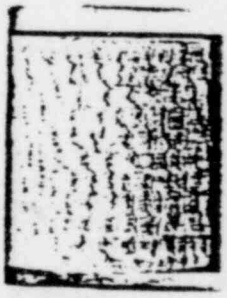
Ornstein Agnes

(Frederick warned of the problems)



FREDERICK Dep.

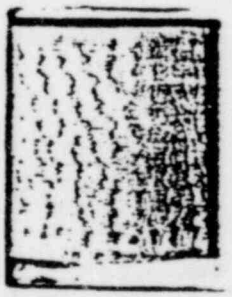
EXHIBIT 17
FOR IDENTIFICATION
E
R
5/



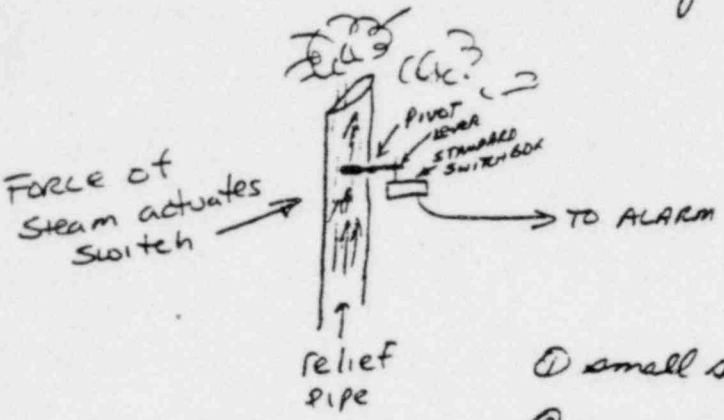
③ The alarm system in the control room is so poorly designed that it contributes little in analysis of a casualty. The other operators and myself have several suggestions on how to improve our alarm system - perhaps we can discuss them sometime - preferably before the system as it is causes severe problems.

④ Your report mentions adding more valve indications to the control room on FW/MS related valves - This should be given very high-priority!

⑤ The suggestion as made in your report to provide the CR with a system & tank volume reference - that is an excellent idea.



(c) You might want to consider a mechanical switch to actuate an alarm which indicates the steam safeties are lifting. It would be actuated by the steam flow and seems more reliable than a sound actuated system.



① small surface area
② near side of pipe
③ near top of pipe so that leakage pasted lever is inconsequential.

(7) I feel that the mechanical failures, poor system designs, and improperly prepared control systems were very much more the major cause of this incident than was operator action.

Although training is always essential and welcome – nothing that we study or practice could have prepared us for this unfortunate chain of events.

(8) I feel that a very critical eye should be turned toward the Test Acceptance Criteria we are using on RPS & ICS

(9) You might do well to remember that this is only the tip of the ice berg. Incidents like this are easy to get into – and the best operators in the world can't.

Compensate for multiple casualties which are complicated by mechanical and control failures.

Some of our suggestions are good. We made suggestions on FW valve indication 2 years ago (submitted many FCR's) We have complained about this alarm system since day one.

Let's get together and try to prevent this from happening again.

Ed. Frederick.

P.S. By the way we had a 17gpm primary leak during this evolution.

Floyd

too many alarms

actual workspace ~ same 4/1 4/2 (Addl panels)

8A panel behind