



RAF

Interoffice Communication

To : Distribution

From : E. L. Kieschnick

Date : January 9, 1979

Subject : VINYL FREEZE-UP, JANUARY 1-5, 1979

This letter is being written to document the problems which caused the freeze-up outage in the vinyl department and to detail the steps being taken to minimize a reoccurrence. It is not intended to belittle the determined efforts extended by the operations, mechanical and engineering departments to bring the unit(s) back on stream.

The main problems resulting in the extended outage were as follows:

1. High dew point instrument air which resulted in an abnormal amount of reactor downtime to steam valves.
2. Loss of the inert line from the new module to the old module.
3. Loss of the incinerator for 4-6 hours which also pressurized the old module.
4. Loss of cooling tower by-pass controls which through manual control caused high/low pressure in the cooling water supply pressure.
5. Loss of recovered VCM receiver level indicators which occasionally resulted in liquid VCM being fed to the incinerator.
6. Loss of knockout tank inlet pressure controllers which contributed to reactor foaming.
7. Insufficient water pressure to aid in flushing the recovery system free of resin.
8. Major freeze-ups of other pieces of equipment or lines.

The steps which have been taken are as follows:

1. High dew point instrument air.
 - a. The No. 9 Joy compressor has been isolated for new and old reactor unit usage only with dew points being run once every eight hours.
 - b. Nos. 4 and 5 dryer activator transfer air has been crosstied to the big Joy "wet air" system to reduce the load on the dry air system.
 - c. Engineering assistance has been requested to determine the need for additional instrument/plant air and air dryer capacity.

Vinyl Freeze-up, January 1-5, 1979

January 9, 1979

Page 2

2. Loss of inert line from the new module to the old module.

- a. The section of line which experienced the greatest freeze-up has been traced and insulated.
- b. A work order has been written to install a new two inch line since the line is susceptible to plugging as well as freezing.

3. Loss of the Incinerator.

- a. J. White is to discuss with Trane the reason for the scrubber/quench tower water flow imbalance and its potential severity. He is also to order spare water sprays and packing, and to discuss the cause for the ignitor plug coating problem.
- b. V. Thornhill is to determine if additional alarms are needed and/or followup on why the annunciator panel is not functioning as designed.
- c. C. Davis is to determine the cause of the stray voltage in the wiring.
- d. Engineering/Operations is to discuss with Plant Manager the feasibility of a second incinerator.

4. Loss of cooling tower by-pass control.

The seal pots and controllers have been temporarily wrapped. However, electrical tracing will be required (w.o. written).

5. Loss of recovered VCM receiver level indication.

- a. D P cell and leads to be traced and insulated on fresh and recovered receivers.
- b. Process Engineering is to specify high level alarms for the fresh and recovered VCM receivers which are not associated with the D P cell.

6. Loss of Knockout tank inlet pressure controllers.

- a. The old unit instrument air leads have been wrapped.
- b. The new unit sensing element will have to be replaced. Maintenance is to order replacement parts. D. Hollis is to spec out a diaphragm type pressure transmitter which is less susceptible to plugging.

7. Low recovery system water pressure.

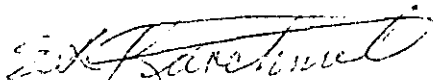
A work order has been written to crosstie the recovery system water supply piping to the high pressure service water header.

Vinyl Freeze-up, January 1-5, 1979
January 9, 1979
Page 3

8. Major freeze-ups.

D. W. Hollis has compiled a major insulation list and is updating it as new items arise. Any items which you feel should be added are to be handled through David.

Comments or suggestions are encouraged and would be sincerely appreciated.


E. L. Kieschnick
Operations Superintendent

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