



INTERNAL
CORRESPONDENCE

BUSINESS CONFIDENTIAL

UNION CARBIDE CORPORATION TECHNICAL CENTER
P.O. BOX 8361, SOUTH CHARLESTON, WV 25303

To: Mr. T. Harrison
Origin: Taft Plant (519)

Date: December 9, 1983

Location:
Attn:

Origin: Central Engineering

Attn: Safety/Health

Copy to:
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Mr. D. L. Brucker - 519
Mr. L. G. Griffin - 519
Mr. B. I. Hurdle - 510
Mr. R. J. Ireland - 500/M3537
Mr. V. H. Johnkoski - 511

Subject: Final Report
Operational Safety/Health Survey
Oxide-Glycol II Unit
Taft Plant

Mr. R. G. Meadows - 511
Mr. P. J. O'Connell - 511
Mr. J. M. Poulson - 511
Mr. R. L. Powell - 519
Mr. T. L. Rapp - 519
Mr. J. E. Sanders - 511
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Mr. G. D. Twait - 511
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Ms. J. E. Wallace - 511
Mr. D. T. Watters - 511
Mr. H. W. Wegert - 511
Mr. J. D. White - 519

Dear Mr. Harrison:

Attached is the final report for the Operational Safety/Health Survey of the Ethylene Oxide-Glycol II Unit at the Taft Plant, which was conducted October 24-28, 1983.

Overall, the OS/HS Team found the area reviewed to be a well-managed, well-maintained facility from the safety/health standpoint. However, during our reviews of unit documentation, interviews with site personnel, and visual inspections of the processing unit, several concerns were identified. Although none of these concerns involves an imminent hazard, several are worthy of prompt attention. The most serious of the Team concerns involve:

1. Ethylene oxide field storage tank monitoring capability at times when Oxide II technician attention may be at reduced levels.
2. A potential for bypassing isolation valves in the ethylene oxide feed line to the glycol system via delta P permissive hardware.

As described in the Operational Safety/Health Guidelines, it is customary for the surveyed unit to publish an action plan addressing the concerns outlined in the report within about 60 days of receipt of the final report. The response should be addressed to Mr. W. R. van der Hoeven with copies distributed as indicated on Pages 11-12 of the Guidelines.

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FINAL REPORT
OPERATIONAL SAFETY/HEALTH SURVEY
OXIDE II UNIT
TAFT PLANT

SURVEY DATES: OCTOBER 24-28, 1983

REPORT DATE: DECEMBER 9, 1983

D. A. Gosselin
B. I. Hurdle
P. J. O'Connell
J. M. Poulson (Part-time)
G. D. Twait
J. E. Wallace

LESSER CONCERNS - Continued

SL6.4 Vibration Probe Reliability

It was noted that several vibration probes around the air train and cycle machine turbine are bypassed because of reliability problems with these probes. Lack of adequate devices for sensing vibration of rotating equipment can lead to damage to such equipment when vibrations go unnoticed. In some instances, hazardous vapor releases can result.

Recommendation

An investigation should be made into why the bypassed vibration probes have failed, and these probes should be placed back into service or replaced as soon as the problem can be corrected. Until then, the rotating equipment concerned should be closely monitored to prevent possible damage due to undetected vibrations.

SL6.5 Asbestos Gaskets in Ethylene Oxide Service

Spiral-wound asbestos filled gaskets are occasionally discovered as having been used in ethylene oxide service. Because ethylene oxide attacks the asbestos, the use of asbestos gaskets in oxide service increases the potential for fugitive oxide emissions in the unit from leaking flanges.

Comment

Continue to stress the importance of not using asbestos gaskets in ethylene oxide service and tighten administrative controls, where possible, to keep this from recurring.

SL7. HUMAN FACTORS

SL7.1 Lone Supervisor for Two Units at Night

On night shifts, the Oxide II Supervisor is also responsible for the Oxide I Unit, which could result in inadequate supervisory coverage if both units have problems at the same time. Because of the interruption of the plant steam system when either unit goes down, it is likely that the other would be in trouble, as well as other areas in the plant. Furthermore, whenever the Emergency Squad is called out, the supervisor goes, taking one technician from each Oxide Unit. This leaves both units shorthanded and with no supervision.