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UNION CARBIDE CORPORATION P. O. BOX 324, TUXEDO, NEW YORK 10987
MEDICAL PRODUCTS DIVISION TELEPHONE NUMBER: (914) 351-2131

May 19, 1982

Mr. Richard Keiming
U.S. Nuclear Regulatory Commission
Office of Inspection & Enforcement, Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Keiming:

On May 7, 1982, you were notified via telephone by Marcus H. Voth, Union Carbide's Manager of Nuclear Operations, that a Technical Specification Required Limiting Condition for Operation instrument was inoperable for a short period on May 6th. A telecopy was afterwards sent to Mr. Haynes of your office to confirm the above telephone conversation. Technical Specification 6.5.3.a.(3)(b) requires this report to the Commission following any operation in violation of a Limiting Condition for Operation.

At 1441 on May 6th, the Reactor Control Room received a stack monitor high level alarm. The Control Room operator immediately informed the Health Physics Department of this occurrence. A Health Physics technician proceeded to the stack monitor and noted that there had been a small release from the Hot Laboratory cells. The release showed an increase on the particulate, iodine, and gaseous monitors, but was high enough to set off only the gaseous monitor. The recorder charts indicate that the gaseous level was higher than the setpoint for no more than two minutes. This gaseous release is calculated to be less than 1/2 percent of the weekly gaseous discharge limit. By the time the Health Physics technician had arrived at the stack monitor, all three indicators (particulate, iodine, and gaseous) were again showing normal, below setpoint readings.

The Health Physics technician noted the normal stack readings and proceeded to perform his daily calibration checks on the system. The technician de-energized the vacuum pump which draws the effluent sample as is routine during the calibration check. After the checks were completed, the technician failed to re-energize the pump. The control room operator, realizing he had an unduly long stack alarm, investigated at the stack monitor. Finding the stack monitor pump off he re-energized the system. The pump was left de-energized from 1503 until approximately 1845.

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The stack vacuum pump left de-energized will give improper readings on the particulate, iodine, and gaseous monitor of the stack monitoring system. The stack monitor is a part of the radiation monitoring system and is required for reactor operation by the Technical Specifications. A de-energized pump will initiate an alarm in the Control Room, but this alarm is the same alarm used to signify a high level in any of the three stack monitors. Because the Health Physics technician did not inform the Control Room that the Hot Laboratory release was over, it was erroneously assumed by the Control Room operators that the minor Hot Laboratory release was still ongoing and was the reason for the continuous alarm. During the period when the vacuum pump was de-energized the stack monitor repeating recorders in the control room indicated to the control room operators that particulate, gaseous, and iodine levels were very near or below their set points. These indications, although at this time also giving improper readings, implied to the control room operators that the presumed ongoing release was not discharging any significant amount of radioactive effluent.

During the time that the stack monitor was disabled, it can be established that there was no significant stack release. The reactor was operating normally and no processes were in progress in the Hot Laboratory cells which could have lead to a stack release. Four continuous air monitors (CAMs), spread throughout the reactor and Hot Lab buildings, showed no abnormal levels. A stack air sample is continuously drawn through a carbon and filter paper cartridge. This cartridge was checked following the incident and showed no abnormal particulate or iodine levels. While the gaseous level is not available from this cartridge check, it can be assumed from the cartridge that there was no elevated gaseous level because the particulate and iodine showed normal levels and a gaseous release would normally be accompanied by higher particulate and iodine levels. The on site environmental monitor, which measures particulate, gaseous, and iodine levels, was also checked and showed no elevated levels for particulate, gaseous, or iodine for the time period when the pump was disabled.

Corrective Action

This incident is being discussed with all personnel in the Reactor Operations and Health Physics Departments. Emphasis has been placed on the importance of quick response to alarms, continuous surveillance of conditions in an alarm state, and of accurate and correct instrumentation checks.

A remote stack reset button is being installed in the Control Room which will supplement the local stack reset button. This will allow reactor operators to reset and clear an in-alarm stack monitor alarms more expeditiously.

Mr. Richard Keiming
USNRC

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An audible local alarm is being installed on the stack monitoring system to indicate de-energization of the stack vacuum pump.

The control room repeating stack monitor recorder set points have been more accurately marked to allow the operators better guidance in determining when a stack monitor release has concluded and therefore when the stack monitor can be reset.

Sincerely,

William G. Ruzicka

William G. Ruzicka
Reactor Supervisor

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