

Omaha Public Power District
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402/636-2000

November 7, 1994
LIC-94-0230

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, DC 20555

References: 1. Docket No. 50-285
2. Letter from NRC (S. J. Collins) to OPPD (T. L. Patterson)
dated October 6, 1994

Gentlemen:

SUBJECT: NRC Inspection Report No. 50-285/94-20, Reply to a Notice of
Violation (NOV)

The subject report transmitted a NOV resulting from an NRC enforcement conference
held on September 27, 1994. Attached is the Omaha Public Power District (OPPD)
response to this NOV.

If you should have any questions, please contact me.

Sincerely,

W. G. Gates

W. G. Gates
Vice President

WGG/grc

Attachment

c: LeBoeuf, Lamb, Greene & MacRae
L. J. Callan, NRC Regional Administrator, Region IV
S. D. Bloom, NRC Project Manager
R. P. Mullikin, NRC Senior Resident Inspector

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REPLY TO A NOTICE OF VIOLATION

Omaha Public Power District
Fort Calhoun Station

Docket: 50-285
License: DPR-40
EA 94-193

VIOLATION

During an NRC inspection conducted on August 30-31, 1994, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violation is listed below:

10 CFR 50.54 (q) requires, in part that a licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 50.47(b) and the requirements in Appendix E of this part.

The Fort Calhoun Station Radiological Emergency Response Plan, Section D, paragraph 2.0 states that specific criteria are provided in the Emergency Plan Implementing Procedures for the recognition, characterization, and declaration of each of the emergency classifications.

Section D, paragraph 2.2 states, in part, that a Notification of Unusual Event is generally characterized by abnormal plant conditions which, by themselves, do not constitute significant emergency conditions. Some of these events could indicate a potential degradation in the level of plant safety and/or escalate to a more severe condition if appropriate action is not taken. The primary purpose for this classification is to ensure that the plant operating staff recognizes the initiating condition, takes appropriate action, such as assessment and verification, and comes to an appropriate state of readiness to respond in the event that the condition worsens.

Emergency Plan Implementing Procedure EPIP-OSC-1, Revision 23, "Emergency Classification," Section 5.4, requires that the Shift Supervisor/Site Director turn to the appropriate Emergency Action Level (EAL) page in Attachment 6.1, Emergency Action Level Verification Criteria and Applicable Modes. Section 5.4.1 requires that if verification is made Declare the Emergency Classification Indicated.

Attachment 6.1, EAL 11.6 requires, in part, that a Notification of Unusual Event be declared for:

1. Any plant condition exists that warrants increased awareness on the part of plant operating staff or state authorities.

OR

2. Any event is in progress or has occurred which indicates a potential degradation of the level of safety of the plant.

Contrary to the above requirement, on May 26, 1994, a Notification of Unusual Event was not declared at or about 3:25 a.m. following an event involving a toxic gas release in the turbine building such that a potential degradation of the level of safety of the plant existed, and which warranted increased awareness on the part of plant operating staff. Specifically, at about 12:40 a.m., a leak was identified on a concentrated hydrazine storage container located in the turbine building (within the protected area). At about 3:25 a.m., an attempt was made by the shift chemist to neutralize the hydrazine with concentrated hydrogen peroxide. A violent exothermic reaction occurred resulting in the release into the turbine building of a large cloud of reaction products. As a result of the reaction, the shift chemist was dazed, and received chemical burns to his arms. As a result of these events, toxic gases were present in the turbine building in concentrations that would not be measured for several hours. These conditions warranted increased awareness on the part of the plant operating staff and had the potential for degrading the level of safety of the plant by affecting operations personnel, or by restricting access to the affected plant areas.

This is a Severity Level IV violation (Supplement VIII)

OPPD RESPONSE

A. The Reason for the Violation

The root cause of this violation was determined to be a failure to follow

procedures. During the incident, the Shift Supervisor was working in Procedure EPIP-OSC-1, Attachment 6.1, Emergency Action Level (EAL) 11.8, and no Personnel Exposure Limits had been measured or exceeded. However, Attachment 6.1, EAL 11.6 was not adhered to, in that a Notification of Unusual Event (NOUE) was not declared following a failed attempt to neutralize the hydrazine spill that caused an exothermic reaction and vapor cloud at 3:25 a.m. Management review of the event, after the fact, has determined that even though Shift Supervisor judgement is involved in invoking EAL 11.6, it would have been appropriate to do so.

Additionally, contributing causes to this event were determined to be a weakness in ability to make declarations using EAL 11.8, a lack of a hazardous materials incident response plan and an inadequate modification acceptance, in that there was no specific procedure or training developed on changeout of the hydrazine totes when the modification was accepted by the plant.

B. Corrective Steps That Have Been Taken and the Results Achieved

1. To ensure integrity of the hydrazine totes and hydrazine chemical delivery system, a detailed inspection of piping/valves and pumps related to the hydrazine chemical addition system was completed. The results of this inspection revealed that the hydrazine chemical delivery system was intact and not leaking. This was completed later on May 26, 1994.
2. To aid Fort Calhoun Station staff involved in working with the hydrazine totes, a Preventive Maintenance Order (PMO), WP009587, "Replace Returnable Bulk Chemical Storage Container When Required By Operations", was written and approved. This PMO will be used by maintenance personnel to control hydrazine tote replacements. Therefore, actions necessary to ensure proper tote changeout are now procedurally controlled. The PMO was revised to its present form on August 1, 1994.
3. To ensure that EALs related to toxic gas releases focus upon impact on plant operations rather than specific Personnel Exposure Limits (PEL) for toxic gases, OPPD has revised the EALs, within EPIP-OSC-1. The revision entailed the elimination of the PELs for toxic gases. This revision allows the Shift Supervisor to declare an incident without relying upon results of toxic gas sampling. OPPD determined that sampling time needed to determine concentration of some toxic gases tended to slow the decision making process and thus any protective action measures. This was completed on October 13, 1994.

4. A Hazardous Materials Incident Response Plan (HMIRP) has been developed and implemented as Standing Order G-106. These actions were completed October 31, 1994. The plan contains the following attributes:
 - It will assist the flow of information between the incident scene and the Control Room.
 - Requirements for an Incident Commander at the scene of an event involving hazardous materials. The Incident Commander's purpose is to establish command/control at the scene. Additionally, the Incident Commander provides a singular point of contact for the Shift Supervisor.
 - Provides a mechanism to effectively deal with a non-nuclear incident that could lead to a declaration of any of the Emergency Classes.
 - Development of pre-planned strategies for mitigating chemical spills in pre-defined chemical hazard areas. The chemical hazard areas and pre-planned strategies are incorporated as part of the HMIRP.
 - Personnel that may be involved with hazardous material spills were trained on recognition, response and cleanup of hazardous material spills.
5. To prevent recurrence of this event, OPPD revised OI-CF-1, "Secondary Chemical Feed System Normal Operation." The purpose of this revision was to provide a figure detailing normal system lineup. The procedure was issued September 20, 1994. Training on OI-CF-1 was completed on October 26, 1994.
6. OPPD evaluated the Feedwater Chemical Addition System for possible improvements. This evaluation was completed on October 31, 1994. OPPD is currently considering the various options for possible system modification.

Until a decision is reached on possible system improvement options, work or transfer of equipment/vehicles into the turbine building truck bay will require a Standing Order G-87, "Non-Routine Activities Requiring Formalized Plans", briefing prior to the performance of the activity. This briefing will ensure that

personnel involved in a particular activity are aware of the hazards hydrazine poses to personnel and to the plant. The briefing will emphasize potential hazards when working near the hydrazine totes.

C. Corrective Steps That Will Be Taken to Avoid Further Violations

1. To ensure its effectiveness, HMIRP response will be evaluated. This evaluation will consist of the completion of periodic Hazardous Materials drills in the plant (similar to Fire Brigade drills) in order to assess the effectiveness of the Hazardous Materials team and HMIRP. This effectiveness evaluation will be implemented by December 1, 1994.
2. As a result of this incident, the Plant Review Committee (PRC) formed a special subcommittee to evaluate current effectiveness of the SAC process as it relates to the handling of plant modifications. Upon completion, this subcommittee will make recommendations and implement improvements in the process. This evaluation will be completed by December 15, 1994.
3. In relation to the SAC process, Modifications/ECNs that were not accepted or were accepted with deficiencies, since January 1, 1993, will be reviewed. This review will ensure that the problems raised by the SAC (or reviewers) were properly resolved. This review will be completed by December 15, 1994.
4. As part of periodic shift supervisor meetings, management has provided feedback to the shift supervisors concerning the expectation of conservative implementation of the Emergency Plan (i.e., a NOUE for various events that result in potential plant degradation of the level of safety to the plant). To further strengthen the expectation that shift supervisors will conservatively implement the Emergency Plan based upon plant conditions, further reinforcement will be provided. This will be completed by January 1, 1995.

D. Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance based on the completed actions listed above.