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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop P1-137
Washington, D. C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
REPLY TO A NOTICE OF VIOLATION
(50-387/96-04-02; 50-388/96-04-02 AND
50-387/96-04-03; 50-388/96-04-03)
PLA-4473 FILE R41-2

Docket Nos. 50-387
and 50-388

This letter provides Pennsylvania Power and Light Company's response to the Notice of Violation (50-387/96-04-02; 50-388/96-04-02 and 50-387/96-04-03; 50-388/96-04-03) contained in NRC Integrated Inspection Report 50-387/96-04 and 50-388/96-04 dated May 23, 1996.

The notice required submittal of a written reply within thirty (30) day of the date of the letter. We trust that the Commission will find the attached response acceptable.

If you have any additional questions, please contact Mr. R. D. Kichline at (610) 774-7705.

Very truly yours,

R. G. Byram

Attachment

copy: NRC Region I
Ms. M. Banerjee NRC Sr. Resident Inspector
Mr. C. Poslusny, Jr. NRC Sr. Project Manager

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REPLY TO A NOTICE OF VIOLATION

Violation A (387/96-04-02; 388/96-04-02)

Pursuant to 10CFR20.1003, a *high radiation area* is an area, accessible to individuals, in which radiation levels could result in excess of 0.100 rem in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

Contrary to the above, on January 4; 1996, through February 1, 1996, a high radiation area in the decontamination building on the refueling floor (818 ft. elevation), with dose rates up to 0.800 rem in 1 hour at 30 centimeters from the radiation source (a vacuum), was not conspicuously posted as a high radiation area.

Response:

1. Reason for the Violation

On January 4, 1996, a radiation source (under-water vacuum housing) was placed in the decontamination building on the refueling floor (818 ft. elevation). The dose of the vacuum housing warranted that the decontamination building be posted as a high radiation area. This posting was performed on February 1, 1996. The causes for the failure to post the decontamination building between January 4, 1996, and February 1, 1996, are:

- On January 4, 1996 only one door of the decontamination building was posted indicating that the building was a high radiation area. The need to post the remaining doors went undetected because of a lack of clear procedural and work practice guidance which resulted in human error. As a result no survey of the decontamination building was completed after the vacuum housing was placed in it, and the need to post all doors went uncorrected until February 1, 1996, when the vacuum housing was identified as a high radiation source.

- Surveys that were conducted subsequent to placing the vacuum housing in the decontamination building also failed to identify the posting deficiencies. The initial survey performed on January 4, 1996, was incomplete. Another survey of the building was conducted on January 8, 1996, but was only performed at one corner of the building and did not identify any unusual radiation conditions. Subsequently, a survey conducted on January 15, 1996, did identify slightly elevated dose rates at one location outside the building. However, the slightly elevated dose rates were considered insignificant because the health physics technician performing the survey did not recognize that the elevated dose rates were from a high radiation source, i.e., the vacuum housing.

2. Corrective Steps Which Have Been Taken and the Results Achieved

a. All doors to the decontamination building on the refueling floor were immediately posted on February, 1, 1996, following identification that the vacuum housing was a high radiation source. Subsequently, a new rope barricade was erected to prevent access to the decontamination building. Therefore compliance with high radiation area posting requirements was achieved.

b. Although functionally adequate, numerous procedures have been revised to clarify station survey, posting, and work practices when working with radioactive equipment. These procedural revisions will strengthen the station's radiation controls program.

c. The health physics technician involved in this event was counseled as to the necessity to complete survey and posting requirements pursuant to station procedures.

d. Health Physics training was conducted which will enhance a "questioning attitude" regarding radiological changes noted during routine surveys. The purpose of this training was to sensitize the health physics technicians on the need to follow-up and perform additional investigative surveys when elevated radiation levels are measured.

e. Locking devices were placed on the decontamination building doors so that in the future this facility can be locked when radiation levels require locked radiation controls.

f. A "radiological safety note" was distributed to station personnel reiterating the necessity of controlling radiological postings.

g. Appropriate radiological controls work programs, and work priorities and communication enhancements associated with outage management activities have been developed. These programs will increase the sensitivity of station personnel to station radiological control concerns, thereby reducing the occurrence of similar events.

h. Areas of the plant which were not already under locked high radiation controls were surveyed and upgraded as necessary to ensure the station was in compliance with NRC posting and barricade requirements.

i. An independent walk-down, by first line supervisors, of high radiation posting changes is now required. This corrective action, which is in response to a subsequent posting event, adds assurances that the 10CFR20 and plant Technical Specification posting and barricading requirements are being promptly and correctly implemented.

3. Corrective Steps Which Will Be Taken to Avoid Further Violations

PP&L management immediately commissioned an intensive investigation to establish the cause and recommend corrective actions in response to this event. The resultant corrective actions taken to address this event were expeditiously dispositioned. PP&L, therefore, considers the corrective actions identified above to satisfactorily address this violation.

4. Date of Full Compliance

Based on the action taken in 2.a above, PP&L is in full compliance.

Violation B (387/96-04-03; 388/96-04-03)

Pursuant to 10CFR20.1003, *survey* means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation.

Contrary to the above, as of April 4, 1996, the licensee did not make surveys to assure compliance with 10CFR20.2001(a), which describes authorized means of disposing of licensed material. Specifically, on September 21, 1995, **(Note: The tanker was released offsite on September 14, 1995, as stated in Inspection Report 50-387/96-04 and 50-388/96-04)** the licensee did not perform a survey before disposing of sludge in a tanker truck as normal, non-radioactive waste. On prior occasions, the tanker truck contained radioactive water above the lower limits of detection for effluent releases.

Response

1. Reason for the Violation

On February 29, 1996, PP&L was notified, by an organization in Montreal, Quebec Canada, that a tanker truck previously used by PP&L (PP&L identification #255-216) had a radioactive materials label affixed to the tanker. Prior to releasing the tanker offsite, the tanker (which had previously contained slightly contaminated water) was surveyed using existing procedures, and determined to be acceptable for offsite release. Prior to transport to Montreal, Quebec the tanker was thoroughly cleaned at a truck washing facility in Pennsylvania.

To determine if the tanker may have been contaminated or if other potentially radioactive material may have been in the tanker following release from the site, a tanker (PP&L identification #255-212) that had been used in a similar manner, was surveyed. The survey identified a small amount of slightly radioactive sludge in the bottom of the tanker. Dose calculations performed on this sludge concluded that any dose received would have been a small fraction of applicable dose limits for a member of the public and, based on transportation regulations, the sludge found would have been classified as an "exempt quantity." Because of the process used by PP&L to determine if radioactivity was associated with the tanker, the tanker may have contained similar or slightly lower amounts of slightly radioactive sludge. Therefore, it was concluded that an inadequate survey had been performed on tanker #255-216.

- The reason for the inadequate survey performed on the subject tanker, prior to its release offsite on September 14, 1995, was that:

- No procedural guidance existed that specifically looked for or removed unnecessary labeling prior to release from the radiologically controlled area (RCA) or the site.

- The procedure used to survey for contamination (HP-TP-602) was less than adequate in that it did not specifically require an internal survey of the tanker.

- No overall procedure existed to control the process for use, surveying, sampling, or release of the tanker by the several affected functional organizations within PP&L. Although each functional organization has procedures to address their specific activity, the lack of a comprehensive governing procedure contributed to a lack of training related to aspects of releasing of material offsite, weak programmatic control of tankers for release from the RCA and site, less than adequate contamination control of empty containers, and less than adequate work plans for completely emptying the tanker.

2. <u>Corrective Steps Which Have Been Taken and the Results Achieved</u>

a. The remaining tankers at Susquehanna that are utilized for similar purposes have been relocated within the protected area, and have been physically secured. This will ensure positive control of these tankers prior to release offsite.

b. Nuclear Department procedures (NDAP-OO-0627 and HP-TP-0602) have been revised to require that the internal surfaces of tankers be surveyed prior to exiting the site.

c. Nuclear Department Administrative Procedure (NDAP-00-0627) has been revised to incorporate steps that remove unnecessary labels on tankers prior to release offsite. Incorporation of a specific procedural step to remove labels in this NDAP, which applies across functional organizations, provides assurances that only required labeling will be attached to tankers exiting the site.

d. The truck wash facility was surveyed. No nuclides attributable to nuclear power plant operation were identified.

e. The internal structure of several tankers has been inspected to determine if there are any physical obstructions that will prevent the complete draining of material from the tanker. This inspection concluded that there are no major structural internals that should prevent the complete draining of a tanker. At least two designs have been identified; however, they present no significant impediments to emptying the tankers.

f. PP&L correspondence was sent to the organization in Montreal, Quebec, who received the tanker, stating that there was not a radiological hazard associated with the tanker, and that the label could be removed.

3. Corrective Steps Which Will Be Taken to Avoid Further Violations

a. Surveys of the remaining tankers that were utilized for similar purposes will be performed to assure that they are not radioactively contaminated nor contain radioactive sludge above station release limits. These surveys are scheduled to be completed by July 31, 1996.

b. Inspections of the remaining tankers that were utilized for similar purposes will be conducted to assure that inappropriate labels have been removed. These inspections are scheduled to be completed by July 31, 1996.

c. Requirements associated with tanker activities within the protected area will be enhanced to assure that adequate controls exist for the use, surveying, sampling, labeling, etc. of tankers. These requirements are scheduled to be developed and implemented by July 31, 1996.

f. The overall program for controlling and coordinating the process for removing material from the RCA and site will be evaluated. This evaluation is scheduled to be completed by July 31, 1996.

d. Training will be provided, to applicable functional organizations, that addresses the release of materials from the RCA that may be slightly radioactive. This training will contain elements associated with appropriate lower limits of detection (LLD's), plate out mechanisms and the different requirements for release of materials from the RCA and offsite. Initial training for key functional organizations is scheduled to be completed by September 30, 1996.

4. Date of Full Compliance

Based on 2.a and 2.b above, PP&L is in full compliance.