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February 17, 1994

Gary L. Shear, Chief
Fuel Cycle and Decommissioning Branch
Region III
U. S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, Illinois 60532-4351

Docket #70-0036
License #SNM-33

SUBJECT: RESPONSE TO NOTICE OF VIOLATION

- Ref: 1. Letter, Gary L. Shear (NRC) to J. A. Rode (CE), Notice of violation, dated November 8, 1993
2. Letter, J. A. Rode (CE) to Gary L. Shear (NRC), Response to notice of violation, dated December 8, 1993.

Dear Mr. Shear:

The enclosure provides an update and additional details to supplement Combustion Engineering's response to a Notice of Violation concerning Inspection Report 070-00036/93003, as discussed with Mr. George France of your staff.

We will gladly discuss any questions you have concerning our response. If you have any further questions, please do not hesitate to contact me or Mr. Hal Eskridge of my staff at (314) 937-4691.

Sincerely,

Robert W. Sharkey
Manager, Regulatory Compliance

RWS/sld
RC/10183

Enclosure

cc: George France, NRC Region III

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ABB Combustion Engineering Nuclear Fuel

FEB 24 1994

**REPLY TO NOTICE OF VIOLATION
(INSPECTION REPORT No. 70-0036/93003)**

Response to Violation VIO No. 070-00036/930003-01

As stated in the inspection report, the combustible items on or near the UF₆ storage pad did not contain enough BTUs to cause a problem if ignited. We agree, however, that there was a housekeeping problem with the pad. During the NRC inspection the three cardboard boxes that were on the apron of the pad were removed. During the following week, the vegetation growing around the pad was cut back and the area was cleaned up.

The cause of the violation was the unclear and overlapping responsibilities for the pad. On November 24, 1993, the Plant Manager issued a memo clearly defining the responsibilities for this area:

Bob Miller, the administration and Production Control Manager, is responsible for the placement, handling, and removal of the UF₆ cylinders. These duties are typically delegated to Charlie Lovell, the warehouse supervisor. Bob should also insure that material such as boxes, wood, and other flammable material is not left on the pad.

Arlon Noack, the Facilities Manager, is responsible for maintaining the integrity of the storage pad. This includes removing grass from the around the pad.

Sten Borell, Chemical Operations Manager, is responsible for UF₆ inside of the receiving area. Oxide operators are responsible for recognizing fire hazards around the UF₆ cylinders, including those on the storage pad.

Bill Sharkey, Regulatory Compliance Manager, should ensure that the pad is inspected periodically for the accumulation of debris.

Responsibilities for cylinder handling and storage pad maintenance were consolidated under a new Production support Manager, Dave Stokes, effective February 15, 1994. Additionally, a barrier to prevent vegetation growth around the pad will be installed prior to the spring growing season.

The above actions should avoid further violations concerning condition of the UF₆ storage pad. We believe that we were technically in compliance when the "stored" cardboard boxes were removed during the NRC inspection, and that this item should have been a non-cited violation. The storage pad remains in full compliance as of the date of this report.

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Response to Violation VIO No. 070-00036/930003-02

We agree that the operator's failure to close the bottom valve is a violation of Operating Sheet 601.10. An Oxide Plant operator was obtaining a sample of UO_2F_2 from the R-1 reactor for further analysis. During the operation he opened the top valve of the sample collection port to allow the UO_2F_2 to drop into the collection area. The top valve was then closed and the bottom valve was opened to allow the material to drop into the sample container. While the material was dropping into the sample container the operator left the sampling station to blow down the R-2 back up filter located 5 feet away. Because of a small leak in the top valve, UO_2F_2 bled through to the ventilation system and the smoke detector in the ventilation system shut the ventilation system down, causing material to escape the sample collection station enclosure into the work area.

Following the incident and to prevent recurrence the upper valve was rebuilt, the procedure was clarified and the operators were trained to the procedure revision. However, the location of the smoke detector, which was installed as required by our insurance company, American Nuclear Insurers, was determined to be a major contributor to the problem. The ventilation system smoke detectors were relocated to a position between the HEPA filters in each of the three filter banks during the December 1993 Christmas shutdown period. This change was discussed with ANI personnel who concurred with the relocation.

We believe that retraining of the operators immediately following the August 25 incident achieved full compliance with regard to the requirement to follow procedures contained in Condition No. 9 to SNM-33. The corrective actions discussed above should assure compliance in the future and mitigate the consequences of a release within ventilated enclosures.

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Response to Violation VIO No. 070-00036/930003-03

We agree that failure to obtain a nasal smear following a UO_2 release is a violation of Operating Sheet 324. However, a nasal smear is used as a screening tool following a release to determine if an intake occurred that requires follow-up bioassay measurements. In this case, fecal sampling was conducted as if a positive nasal smear had been obtained.

To prevent recurrence of a similar incident, both the operator and the supervisor were counseled and contamination control training was conducted. The proper response to a contamination event was emphasized in this training, conducted by the Health Physicist during the month of October 1993. Additional training emphasizing contamination and exposure control was conducted by the Regulatory Compliance Manager and the Health Physicist during December 1993 in preparation for the new 10 CFR 20 regulations.

We believe that we achieved full compliance after conducting the retraining in September. Continued emphasis on exposure necessitated by the lower exposure limits effective January 1, 1994, in addition to increased surveillance by the Regulatory Compliance staff should assure that further violations are avoided.

**REPLY TO NRC CONCERNS
(INSPECTION REPORT No. 70-00036/930003)**

Response to IFI No. 070-00036/93003-01: The inspector observed that the cylinder storage pad was in disarray.

As stated in the response to the VIO No. 070-0036/930003-01, on November 24, 1993 the Plant Manager issued a memorandum clarifying the responsibilities pertaining to the UF₆ Storage Pad. Responsibilities for the cylinder storage pad and the area contiguous to cylinder storage were consolidated under a new Production Support Manager effective February 15, 1994. Vegetation growing around the pad has been cut and the pad has been cleaned up, and a gravel barrier to prevent growth of vegetation around the pad is being installed. Oxide operators and material handlers have been informed of the requirement to maintain good housekeeping on the pad and to not allow combustibles to remain on the pad. A sign has been ordered to post storage requirements that prohibits leaving combustible material in the cylinder storage area.

We believe that the ANSI N665 requirement to separate cylinder storage arrays by at least 50 feet from buildings and other storage areas does not apply to the oxide dock and conversion building, where UF₆ is also stored and processed. This building is constructed of metal and combustible materials are limited to small quantities. By the same reasoning, it would also not apply to the storage area for spent limestone.

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Response to IFI No. 070-00036/93003-02: The inspector observed that tape and caulking material were used to seal components of the slugging press (the powder transfer chute and the panels in the rear of the press).

The Ceramic Operation has redesigned the equipment and methods of slug removal and transfer to the granulator, powder granulation, and mixing of die lubricant into granulated powder. Installation of the new powder handling system between the slugging press and the pellet press is scheduled to start for pellet line No. 1 in March 1994. The planned modifications will reduce the likelihood of material leaking from the equipment and will be an overall ALARA improvement. Modifications are scheduled to be completed for both lines by June 1994.

During October, the Health Physicist provided contamination control training to the ceramic plant operators. This training emphasized good health physics practices and ALARA. This was reemphasized during the new 10 CFR 20 training in December 1994.

Maintenance is performed on the slugging press under several circumstances. Routinely the press is vacuumed out at the end of every batch, which typically occurs several times during the shift. At the end of each shift 30 minutes is provided to perform routine maintenance such as tightening the keys and greasing the press. During this time the press is also wiped down. Maintenance would also be performed whenever pellet quality were unacceptable or a significant safety concern exists.

Response to IFI No. 070-00036/93003-03: Sampling R-1 and R-2 Reactors.

The procedure for sampling the R-1 reactor has been revised and the operators were trained to the procedure revision. The revised procedure instructs the operators to complete the sequence of sampling the R-1 reactor. The operator should not proceed to the R-2 reactor until sample collection is complete at the R-1 reactor. This change was reviewed by the Plant Safety Committee.

Response to IFI No. 070-00036/93003-04: Operator and Health physics technicians responsibility in response to air monitor alarm.

As noted in the inspection report, a mix up with the newly installed plant paging system caused confusion during an incident response. The correct phone numbers for paging site wide have been reinforced subsequent to the incident and personnel are now familiar with the paging system.

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Response to IFI No. 070-00036/93003-05: The chemical reaction of HF on the HEPA filter media caused deterioration of filter material and led to the stack release of SNM.

Several equipment modifications have been made to reduce the possibility of HF going through the HEPA filter bank. The major changes that has been implemented to date are the replacement of the seals at the back up filter blow down station. We have continued to inspect the HEPA filter bank bi-weekly to determine if there are any signs of filter degradation.

Calculation of the third quarter air effluents show that 132 μCi was released which is well below the license limit of 150 μCi per quarter. Another incident of HF damage to the filter occurred at the end of December 1993, resulting in releases which exceeded the 150 μCi ALARA limit. This incident and corrective actions are discussed in a separate report dated January 28, 1994, submitted as required by condition S-8.a. of License SNM-33.

Response to IFI No. 070-00036/93003-06: Dust purported to be zirconium oxide is accumulating on the tube/rod slide where the rods exit from the fuel scanner.

In the past we have conducted ignitability tests on material similar to that observed at the exit end of the fuel rod scanner. Results of the tests showed that the material was not ignitable. Since the rods pass through the scanner in a continuous plastic tube, significant accumulation within the scanner is unlikely. Zirconium oxidizes to a simple oxidation state, ZrO_2 , as shown in the CRC Handbook of Chemistry and Physics, thus oxidation to a higher state is not a concern. The Chief metallurgist of Sandvik Metals, our zirconium supplier, confirmed that ZrO_2 is extremely stable.