

POWER AUTHORITY OF THE STATE OF NEW YORK

JAMES A. FITZPATRICK NUCLEAR POWER PLANT



JOHN D. LEONARD, JR.
Resident Manager

P.O. BOX 41
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February 23, 1979
JAFP-79-095

315-342-3840

Mr. Boyce H. Grier, Director
United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Reference: Docket #50-333 IE Inspection #78-28

Dear Mr. Grier:

With reference to the inspection conducted by Mr. K. Plumlee of your office on December 4-7, 1978, at the James A. FitzPatrick Nuclear Power Plant, and in accordance with the provisions of Section 2.201 of Part II of Title 10 of the Code of Federal Regulations we are submitting our responses to Appendix A Notice of Violation Items B, C, and D transmitted by your letter dated January 31, 1979 as received by the undersigned on February 5, 1979.

APPENDIX A

Notice of Violation

Based upon the results of an NRC inspection conducted on December 4-7, 1978, it appears that certain of your activities were not conducted in full compliance with NRC regulations and the conditions of your License No. DPR-59 as indicated below. Items A1, A2 and E are deficiencies; Items B, C, D and F are infractions.

B. Technical Specification Section 6.11, "Radiation Protection Program" requires that procedures for personnel radiation protection shall be prepared and adhered to for all plant operations, and that the procedures shall include planning, preparation and training for operation and maintenance activities.

1. Contrary to the above, an individual who was required to wear a half-mask respirator to perform work under RWP No. 9765 failed to perform the negative pressure test of the respirator fit required to comply with the Radiation Protection Operating Procedures, Section III.B3.5.3 at 11:20 p.m. on December 4, 1978. The individual had not been trained in the test procedure.

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2. Contrary to the above, Restricted Area signs were not posted on December 6, 1978, at two temporary outdoor storage areas as was necessary to comply with the Radiation Protection Procedures, Section II.A1.3.1. One area was near the railroad track into the reactor building and the other area was near the radwaste building truck bay, posted as radiation areas, with dose rates of up to 5 mrem/hr at the boundaries.

Response to Item B.1

Section III B3.4 (Respiratory Protection Training) of our Radiation Protection Operating Procedures (RPOP) applies to persons "using a respirator under conditions where a protection factor is applied" as set forth in Section 3.4.1 of the RPOP. In the instance cited (i.e. RWP #9765) half-mask respirators were issued at the discretion of the monitoring technician assigned as a precautionary measure in accordance with Note #4 of Table III B3.2-1 of RPOP as set forth below.

- "4. No respiratory protection necessary below 25% MPC, however, for other reasons such as dust level or paint fumes, the Rad Protection technician may wish to require wearing of some type of respiratory protection."

No respiratory protection factor was applied nor was one required. It should also be noted 10CFR20.103 is not applicable in this case since the concentration of radioactive materials was less than those defined in 10CFR20.203(d)(1)(ii) (i.e. <10% MPC - RE: survey #F- 17705). Therefore, training in the half-mask respirator was not required.

The individuals in question, however, were trained in accordance with Section III B.3.4 of the RPOP on 8/17/78 and 8/31/78. This training included a demonstration of how to obtain a proper fit on a respirator and how to perform the negative pressure test. The personnel were trained in the use of the types of respirators which are used in cases where respiratory protection factors are required (see Section III B3.1 of the RPOP). Half-mask respirators are not included since it has been our practice (as noted by the Inspector - see details of inspection report item 6, page 10) to use half-masks only under limited conditions where no protection factor is required as illustrated by Note #4 set forth above.

In consideration of the above and also of our reply to item D below, we respectfully request that the status of this item of non-compliance be reviewed by your staff.

Response to Item B.2

The areas in question were posted with "Radiation Area" signs in accordance with 10CFR20. It should be noted that within a few feet (3' to 15') of each roped and tagged area there was a "Restricted Area" sign mounted in clear view on the wall of the building. Since there is no requirement for a "Restricted Area" sign in 10CFR20, we will review the use of "Restricted Area" signs in our procedures. This will be accomplished during our next general review and revision of the Radiation Protection Operating Procedures which we expect to perform before June 1, 1979.

In order to preclude further possible noncompliance prior to our research of the Inspector's finding, additional signs were promptly posted on the day of the inspection.

- C. TS 6.8(A) requires written procedures and administrative policies to be established, implemented and maintained that meet or exceed the requirements and recommendations of Section 5, "Facility Administrative Policies and Procedures" of ANSI N18.7-1972 and Appendix A of Regulatory Guide 1.33, November, 1972.

Procedure No. 1.4, "Control of Plant Procedures" developed pursuant to the above requirements requires that plant procedures shall be controlled, distributed and maintained in accordance with the provisions of this procedure. Section 7.3, "Revisions" and 7.4 "Temporary Changes" require documentation of all revisions and changes to plant procedures using a Procedure Initiation/Revision Request Form.

Contrary to the above requirements, on October 16, 1978, without adhering to any of the requirements of Procedure No. 1.4, the Superintendent of Radiological and Environmental Services issued a memorandum contradicting a requirement to maintain locked gate control of access to high radiation areas > 100 mrem/hr but < 1000 mrem/hr, stated in an approved procedure, "Radiation Protection Operating Procedures", and subsequently required workers adherence to instructions in the memorandum pending the revision of the approved procedure.

Response to Item C

On July 28, 1978 we received an amendment to our operating license concerning access control to high radiation areas (DPR-59 Amendment #38). The plant staff was unclear as to the Commission's interpretation of the words "shall be barricaded" contained in the amendment (see T.S. 6.11(A) 1).

After discussing with your staff as to what exactly constituted a "barricade" the memorandum in question was written. The memorandum uses the following words:

"The barricade must be of a warning type such that inadvertent entries cannot be made. Walls and locked doors are not required for these areas. Instead the use of stanchions and ropes will suffice but the rope must extend around the entire area even across step off pads."

The above paraphrases an NRC Inspector after he had had an opportunity to research the subject.

The memorandum in question was written to explain the actions which technicians should take if they found a high radiation area (> 100 mrem/hr but < 1000 mrem/hr) in the plant which was not behind a locked gate such as an open area where a pipe containing radioactive material passes through a floor. The memorandum had no affect on existing gated areas; this is reinforced by the second paragraph of the memorandum which states:

"It should be noted that we will maintain existing high radiation area gates in the closed and locked position to the extent possible."

This memorandum in no way negated any portion of the Technical Specifications or our Radiation Protection Operating Procedures in force at the time. It cannot, therefore, be considered a procedure revision subject to Administrative Procedure 1.4.

In consideration of the above we respectfully request that the status of this item of noncompliance be reviewed by your staff.

- D. 10CFR20.103(c), "Exposure of individuals to concentrations of radioactive materials in air in restricted areas" requires in part that: When respiratory protective equipment is used to limit the inhalation of airborne radioactive material pursuant to paragraph (b)(2) of this section, the licensee may make allowance for such use in estimating exposure of individuals to such materials provided that such equipment is used as stipulated in Regulatory Guide 8.15, "Acceptable Programs for Respiratory Protection." Section C.4, "Regulatory Position" of Regulatory Guide 8.15 requires the licensee to maintain and implement a respiratory protection program that includes, as a minimum, the following items: (partial list) c. Written procedures to ensure the adequate individual fitting of respirators, as well as such procedures to ensure the testing of respiratory protective equipment for operability immediately prior to each use.

Section C.7 of Regulatory Guide 8.15 states, "Unless otherwise authorized by the Commission, the licensee is not to assign protection factors in excess of those specified in Table 1." Footnote d(2) to Table 1 states that the protection factors apply only for trained individuals wearing properly fitted respirator is to be tested for fit with irritant smoke, prior to use, each time it is donned.

Contrary to the above requirement, the approved Radiation Protection Operating Procedures, Revision 1, November 17, 1978, states that a protection factor of 10 is used with the half face mask and fails to specify that it is to be tested for fit with irritant smoke, prior to use, each time it is donned. Workers were observed donning these masks to perform work under RWP No. 9765 at 11:20 p.m. on December 4, 1978, who did not perform the required test for fit with irritant smoke.

Response to Item D.

As stated above in the response to item B.1 a protection factor was not applied in the case of RWP No. 9765. Breathing zone samples taken at the time work was in progress clearly show that no respiratory protection was required for this work. Half-masks were worn only as a precautionary measure.

Table III B2.2-1 of our Radiation Protection Operating Procedures is merely a reprint of portions of Table 1 of Regulatory Guide 8.15 listing the maximum protection factors which could be used under conditions outlined in the table footnotes. Footnote f (requiring the irritant smoke test) was intentionally deleted for the following reasons:

1. Toxicity^{1,2}

As the name implies irritant smoke is a highly toxic material. Either stannic chloride or titanium tetrachloride is used in aerosol form. Both of these agents liberate hydrochloric acid upon contact with moisture in the air. Precautions are required to protect the skin and eyes of the person tested and the person performing the test. Monitoring for toxic levels is required to protect personnel in the surrounding area. The resultant total biological insult from the irritant smoke is probably greater than from the radioactive materials against which the half-masks are designed to protect.

2. Corrosive Properties³

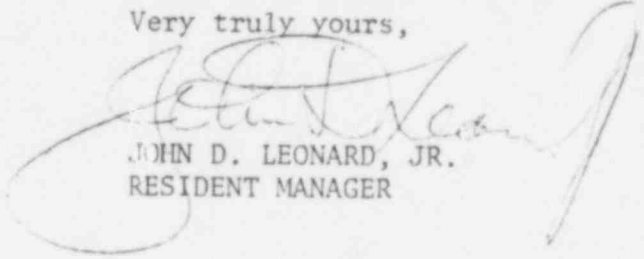
As stated above hydrochloric acid is liberated when irritant smoke is used. Not only is this agent very toxic, it is also the most corrosive agent when in contact with stainless steel. Performing the irritant smoke test each time a half-mask respirator is donned would result in hydrochloric acid aerosols throughout the plant. The problem of chloride stress corrosion cracking of critical stainless steel piping used in reactor safety systems prohibit performing the irritant smoke test.

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We would like to continue our limited use half-mask respirators, however, since they are useful for insulation dusts, paint fumes, etc. in areas where contamination levels are low and no protection factor is required. They have gained wide acceptance from our personnel since they are comfortable and easy to use. To avoid confusion in the future we will delete references to half-mask respirators in Table III B2.2-1 since we have not nor do we intend to apply the allowable protection factor for these respirators.

In consideration of the above we respectfully request that the status of this item of non-compliance be reviewed by your staff. If your staff should insist that we use irritant smoke containing a toxic and corrosive agent each time a half-mask respirator is donned, regardless of whether or not a protection factor is required, we have no choice but to discontinue their use. We await your reply on this item.

Very truly yours,



JOHN D. LEONARD, JR.
RESIDENT MANAGER

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See References Attached 1,2,3

ATTACHMENT NO. 1

DRP-59

Docket #50-333

RESPONSE TO INSPECTION REPORT NO. 78-28

REFERENCES

1. Dangerous Properties of Industrial Materials, Fourth Edition, N. Irving Sax; Van Nostrend Reinhold Company, New York, pp. 1124, 1173
2. NUREG-0041, Manual of Respiratory Protection Against Airborne Radioactive Materials, October 1976, pp. 8-16, 8-17
3. Chemical Engineers' Handbook, Fifth Edition, Perry & Clinton, McGraw-Hill, New York, Sec. 23.