

POWER AUTHORITY OF THE STATE OF NEW YORK

INDIAN POINT NO. 3 NUCLEAR POWER PLANT

P. O. BOX 215 BUCHANAN, N. Y. 10511

TELEPHONE: 914-739-8200



January 3, 1980

IP-JJK-6823

George H. Smith, Chief  
Fuel Facility and Materials Safety Branch  
US Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, Penn. 19406

Dear Mr. Smith:

This letter is provided to you in response to inspection 50-286/79-24 documented in your letter to us dated December 11, 1979 and received at this office on December 14, 1979.

In Appendix A to your letter you noted that 10 CFR 20.401 (b) requires that each licensee maintain records showing the result of surveys required by 10 CFR 20.201 (b). 10 CFR 20.201 (b) requires each licensee to make such surveys as may be necessary to comply with the regulations in this part. Your citation also notes that contrary to the above as of October 31, 1979, a record of the surveys reportedly made during October 1979 to determine compliance of 10 CFR 20.202 (a) (1), as it pertains to the extremity personnel monitoring requirements for individuals entering steam generators had not been maintained.

It is our intention to meet the intent and spirit of the regulations and maintain radiation exposures as low as reasonably achievable. Toward this end, surveys were performed inside the steam generators which provided a profile of gamma and beta doses throughout the steam generator channel heads. These surveys had demonstrated that there was little or no difference in the fields and conditions in the steam generators between this outage and prior outages at this facility and other facilities. Based on past surveys and conditions inside the steam generators it was concluded that the whole body dose would always be more limiting for exposure. In addition, using this monitoring and limitations set on whole body exposure administratively, for this and all work at Indian Point 3, the extremity exposure would be well below 25% of that allowable for extremities. As a result, based on surveys performed on this job and also based on the experience of the personnel issuing the Radiation Exposure Authorization, (REA) an evaluation was performed to determine monitoring and protective clothing requirements for this specific job. These were identified and complied with throughout the work.

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After this inspection, to further demonstrate that extremity exposure would be well less than the 25% of the limits for such exposures for all this work, one worker did have extremity dosimetry placed on him for several steam generator entries. The exposure to this worker's extremities (hands) was 1220 mrem while his whole body exposure was 1040 mrem. This confirmed the evaluation performed by Health Physics personnel based on procedures in existence at the time of inspection. Extremity dosimetry was not placed on a regular basis on all workers making entries because such dosimetry normally impairs the worker's capability to perform his work which involves the need for manual dexterity thereby violating the ALARA principle. On the basis of the above we feel that our actions in this case were best methodologies that could be used to assure the protection of workers, collection of all necessary surveys and insurance that the workers receive radiation doses as low as reasonable achievable (ALARA) for this particular job.

In the future, the person making the first entry into a newly opened steam generator will be provided with extremity dosimetry as well as whole body dosimetry in order to demonstrate that extremity exposure is not above 25% of the allowable level using whole body exposure for control. For subsequent entries by personnel in the same steam generator, extremity dosimetry will not be issued since it does interfere with the performance of work functions by the person wearing such dosimetry.

In this same citation a second point was raised that the licensee fails to provide a record of the surveys reportedly made during October 1979, to determine compliance with 10 CFR 20.101 (a) as it pertains to the dose limits for the lens of the eye of individuals entering the steam generators.

In this case evaluations had been performed by Health Physics personnel based on a knowledge of primary corrosion product radioactivity and the beta component of that radioactivity in conjunction with a knowledge of the physiology of the eye, such that beta exposure to the lens of the eye would not be the limiting condition for exposure on entries to the steam generator. All surveys were on hand and had been performed at the time that the inspector was present on site, however, a written evaluation detailing how this decision on radiation exposure limitation was performed had not been placed on file. Subsequent to this inspection data was collected and placed in a summary report to file identifying all beta emitters present in primary crud and in the steam generator channel head and the eye physiology which demonstrated that this could not result in a significant exposure to the lens of the eye which would become a limiting exposure.

Sincerely,

  
J. P. Bayne  
Resident Manager

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