

NJK-80-29

January 23, 1980

Mr. H. R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: Letter dated July 30, 1979
from N. J. Kalivianakis to H. R. Denton

Dear Mr. Denton:

The purpose of this letter is to inform you of the results of the evaluation of the Quad-Cities Nuclear Power Station's ability, as presently designed, to meet the design objective release rate for radioiodines and radioactive materials in particulate form with half-lives greater than eight days.

Data pertaining to releases for the periods of November and December, 1979, were reviewed to determine the estimated releases originating from each unit. These periods were chosen because the refinements which were made in analytical techniques had been incorporated in the data preparation, the malfunction of the Main Chimney sample system identified in the above reference had been corrected, and because Unit 2 was in a refueling outage during the month of December, which provided a better separation of data related to combined effluent release points. The review indicated that with Unit 1 operating at full power with an off gas release rate of approximately 0.14 Ci/sec, for the sum of seven nuclides measured at the steam jet air ejector (SJAЕ), the corresponding iodine and particulate releases would be from 30% to 40% of the design objective. During the same time period, Unit 2 was operating at approximately 50% of full power, with a similar off gas release rate. Adjusting the releases to the full power equivalent, the estimated total station release is just below the design objective.

The current refueling outage is expected to result in a lower fission product release rate from the Unit 2 fuel causing lower station releases. It is therefore concluded that the station can operate on a day-to-day basis as presently designed, and meet the design objective release rate for radioiodines and radioactive materials in particulate form with half-lives greater than eight days. However, it is anticipated that there may be times when significant in-plant leakage will occur and cause the design objective to be exceeded on a short term basis. The station will continue to closely monitor releases in an effort to identify

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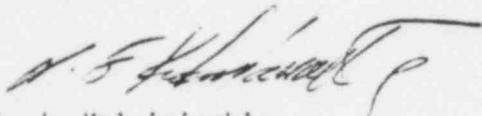
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any significant changes in a timely manner so that corrective measures can be initiated. Also, a significant degradation of fuel cladding would also result in an increase in station releases causing the design objective to be exceeded; but in this case it would be on a longer term basis. The present fuel management program, which includes the removal of the original 7 X 7 fuel assemblies and their replacement with the improved design 8 X 8 fuel assemblies, should greatly reduce the probability of significant fuel cladding degradation from occurring.

In summary, it is expected that following the current refueling outage, two unit operation can resume with the design objective release rate being met on a routine basis without the need for additional changes in plant design or changes in the station Technical Specifications.

Sincerely,



N. J. Kalviaiankis
Station Superintendent
Quad-Cities Nuclear Power Station

cc: J. Keppler, Region III NRC
N. Chrissotimos, Resident Inspector NRC
R. Janecek

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