



June 27, 1994  
IPN-94-074

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station P1-137  
Washington, DC 20555

Subject: **Indian Point 3 Nuclear Power Plant**  
**Docket No. 50-286**  
**Response to Request for Additional Information Concerning**  
**Battery Testing and 24 Month Operating Cycles (TAC No. M84550)**

- References:
1. NRC letter, N. F. Conicella to W. A. Josiger, dated February 16, 1994, "Request for Additional Information Concerning Technical Specifications Amendment Request to Extend Station Battery Surveillance Testing to Accommodate a 24-Month Fuel Cycle (TAC No. M84550)."
  2. NYPA letter, R. E. Beedle to the NRC Document Control Desk, dated September 16, 1992, "Proposed Changes to Technical Specifications Regarding Extending Battery Load Testing to Accommodate a 24 Month Operating Cycle" (IPN-92-041).

Dear Sir:

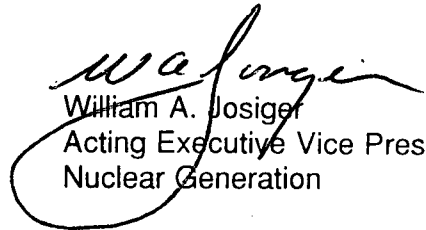
The NRC requested additional information (Reference 1) concerning proposed changes to the Indian Point 3 Technical Specifications for battery testing. The attachments to this letter provide the Authority's response, and supplement the Technical Specification changes proposed in Reference 2.

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If you have any questions, please contact Mr. P. Kokolakis.

Very truly yours,

  
William A. Josiger  
Acting Executive Vice President  
Nuclear Generation

att: as stated

cc: U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Resident Inspector's Office  
Indian Point Unit 3  
U.S. Nuclear Regulatory Commission  
P.O. Box 337  
Buchanan, NY 10511

Ms. Donna Ross  
Division of Policy Analysis & Planning  
Empire State Plaza  
Building Number 2 - 16th Floor  
Albany, NY 12223

Mr. Nicola F. Conicella, Proj. Manager  
Project Directorate I-1  
Division Of Reactor Projects I/II  
U.S. Nuclear Regulatory Commission  
Mail Stop 14B2  
Washington, DC 20555

ATTACHMENT I TO IPN-94-074

EXPLANATION OF REVISED TESTING REQUIREMENTS PROPOSED

RELATED TO

**BATTERY TESTING AND 24 MONTH OPERATING CYCLES**

NEW YORK POWER AUTHORITY  
INDIAN POINT 3 NUCLEAR POWER PLANT  
DOCKET NO. 50-286  
DPR-64

## **Background**

On September 16, 1992, the Authority submitted a proposed change (Reference 2) to the Indian Point 3 battery testing Technical Specifications to accommodate a 24 month operating cycle. In Reference 1, the NRC requested additional information in support of the proposed changes. In response to the request, the Authority is supplementing Reference 2 to include requirements for battery service and performance testing.

Attachment II contains Technical Specification pages 4.6-2 and 4.6-3. These pages are to be used in place of those that were submitted in Reference 2. The information provided below describes the testing requirements contained in the attached Technical Specification pages. Attachment III contains the commitments made by the Authority with this submittal.

## **Proposed Testing Requirements for Station Batteries 31, 32, 33 and 34**

The Technical Specification pages in Attachment II incorporate the Authority's commitment to perform a battery service test at least once every 24 months and a battery performance discharge (or modified performance discharge) test at least once every 60 months.

The service test is a test of the battery's ability to satisfy the duty cycle design requirements, while the performance discharge test is a test of the constant current capacity of a battery to detect any change in the capacity determined by the acceptance test. The purpose of the modified performance discharge is to compare the capacity of the battery against the manufacturer's specified capacity and thereby determine when the battery is approaching the end of its life. The modified performance discharge test is a composite test which consists of a one minute peak load equivalent to that of the service test and a constant discharge current for the remainder of the test which envelopes the next highest load value of the service test. Since the modified performance discharge test bounds the service test, it may be performed in lieu of the battery service test every other 24 month operating cycle. The Authority believes that performing the performance discharge (or modified performance discharge) test more often than once every 60 months, if necessary to accommodate future fuel cycles, is acceptable.

The requirements of the performance tests proposed in this submittal exceed those stipulated in IEEE Standard 450-1987 for battery performance tests. The IEEE standard does not require that performance testing include a one minute peak load equivalent to that of the service test, nor does it require a constant load equivalent to the next highest value for the duration of the test. The performance discharge or modified performance discharge testing of specification 4.6.B.4, in conjunction with the other requirements of section 4.6.B, provide a high level of confidence that degradation of the station batteries will be observed prior to degradation causing a battery to be inoperable.

## **Timing of New Tests**

The current Indian Point 3 Technical Specifications require that the batteries be "load" tested at least once per 18 months. The load tests of the batteries were last performed in September and October of 1993. Once the proposed specification is approved, the Authority will perform

a service test for the station batteries within 24 months ( $\pm 25\%$ ) of the last "load" test performed.

The Authority is committing to conduct the battery performance discharge (or modified performance discharge) test at Indian Point 3 for the first time during refueling outage 10/11, upon completion of modifications needed to support the performance of the test.