ATTACHMENT II TO IPN-94-074

REPLACEMENT TECHNICAL SPECIFICATION PAGES 4.6-2 AND 4.6-3

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

4. Each diesel generator shall be inspected and maintained following the manufacturer's recommendations for this class of stand-by service.

The above tests will be considered satisfactory if the required minimum safeguards equipment operates as designed.

B. Station Batteries

1. Every month the voltage of each cell, the specific gravity and temperature of a pilot cell in each battery and each battery voltage shall be measured and recorded.

2. Every 3 months each battery shall be subjected to a 24 hour equalizing charge, and the specific gravity of each cell, the temperature reading of every fifth cell, the height of electrolyte, and the amount of water added shall be measured and recorded.

3. At least once per 24 months, during shutdown, each battery shall be subjected to a service test and a visual inspection of the plates.[1]

4. At least once per 60 months, during shutdown, each battery shall be subjected to a performance discharge (or modified performance discharge) test.[1,2] This test shall verify that the battery capacity is at least 80% of the manufacturer's rating.

5. Any battery which is demonstrated to have less than 85% of the manufacturer's ratings or, whose capacity drops more than 10% of rated capacity from its previous performance discharge (or modified performance discharge) test, shall be subjected to a performance discharge (or modified performance discharge) test annually, during shutdown, until the battery is replaced.

Basis

The tests specified are designed to demonstrate that the diesel generators will provide power for operation of equipment. They also assure that the emergency generator system controls and the control systems for the safeguards equipment will function automatically in the event of a loss of all normal 480v AC station service power. During the simulated loss of power/safety injection system test of specification 4.6.A.3, certain safeguards valves will be closed and made inoperable, to prevent Safety Injection flow to the core.

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1. A modified performance discharge test may be performed in lieu of the battery service test every other 24 month operating cycle.

2. The first time a performance discharge (or modified performance discharge test) will be performed will be in refueling outage 10/11.

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The testing frequency specified will be often enough to identify and correct any mechanical or electrical deficiency before it can result in a system failure. The fuel supply is continuously monitored. An abnormal condition in these systems would be signaled without having to place the diesel generators themselves on test.

Each diesel generator has a continuous rating of 1750 kw and a 2 hour rating of 1950 kw. Two diesels can power the minimum safeguards loads. To ensure that each diesel can operate at its 2 hour rating (as required by specification 4.6.A.2.), each diesel will be loaded to 1900-1950 kw and run for at least 105 minutes.

Station batteries will deteriorate with time, but precipitous failure is extremely unlikely. The surveillance specified is that which has been demonstrated over the years to provide an indication of a cell becoming unserviceable long before it fails. The periodic equalizing charge will ensure that the ampere-hour capability of the batteries is maintained.

The service and performance discharge test of each battery, together with the visual inspection of the plates, will assure the continued integrity of the batteries. The batteries are of the type that can be visually inspected, and this method of assuring the continued integrity of the battery is proven standard power plant practice.

The battery service test demonstrates the capability of the battery to meet the system design requirements. The Indian Point Unit 3 design duty cycle loads are determined by a LOCA concurrent with a loss of AC power.

The performance discharge test is a test of the constant current capacity of a battery, normally done in the as found condition after having been in service, to detect any change in the capacity determined by the acceptance test. The test is intended to determine overall battery degradation due to age and usage.

The modified battery performance discharge test is a composite test which addresses both the service test and performance discharge test requirements. It shall consist 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. The purpose of the modified performance discharge test 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, as well as to demonstrate capability to meet system design requirements. Every other 24 month operating cycle, the modified performance discharge test may be performed in lieu of the battery service test required by Technical Specification 4.6.B.3.

The station batteries are required for plant operation, and performing the station battery service and performance discharge (or modified performance discharge) test require the reactor to be shutdown.

<u>Reference</u>
FSAR, Section 8.2

ATTACHMENT III TO IPN-94-074

AUTHORITY COMMITMENTS

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

Commitment Number	Commitment	Due Date
IPN-94-074-01	At least once per 24 months, during shutdown, each battery shall be subjected to a service test and a visual inspection of the plates.	This is a new requirement. See note (1). This commitment is in lieu of the current requirement stipulated in specification 4.6.B.4 to subject each battery to a load test once per 18 months.
IPN-94-074-02	At least once per 60 months, during shutdown, each battery will be subjected to a performance discharge (or modified performance discharge) test.	This is also a new requirement. See note (2)
IPN-94-074-03	The battery modified performance test will consist 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.	See note (2)
IPN-94-074-04	The battery performance discharge (or modified performance discharge) test will verify that the battery capacity is at least 80% of the manufacturer's rating.	See note (2)
IPN-94-074-05	Any battery which is demonstrated to have less than 85% of the manufacturer's ratings or, whose capacity drops more than 10% of rated capacity from its previous performance discharge (or modified performance discharge) test, shall be subjected to a performance discharge (or modified performance discharge) test annually, during shutdown, until the battery is replaced.	See note (2)

NOTE (1): The first time the battery service test is expected to be performed is in refueling outage 9/10; a service test will be performed within 24 months (±25%) from the time the load test (specified previously in specification 4.6.B.4) was last performed.

NOTE (2): The first time the battery performance discharge (or modified performance discharge) test will be performed will be in refueling outage 10/11. These commitments will be implemented beginning at that time.