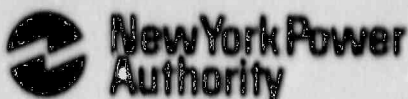


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William Fernandez II
Resident Manager

April 2, 1990
JAFF-90-0290

United States Nuclear Regulatory Commission
Document Control Desk
Mail Station P1-137
Washington, D.C. 20555

SUBJECT: DOCKET NO. 50-333, DIESEL FIRE PUMP INOPERABILITY

Dear Sir:

The New York Power Authority (NYPA) submits the following special report to address inoperability of a fire pump for more than 7 days.

The event requires that a 30-day special report be submitted in accordance with Technical Specifications 3.12.A.1.c and 6.9.B.2.

Summary of Event

Diesel engine driven fire pump 76P-1 was out of service for approximately 7 days and 14 hours due to failure and replacement of the starter motor.

Description of the Event and Corrective Action

On March 2, 1990 at 0925 hours diesel engine driven fire pump 76P-1 was declared inoperable when the starting system indicators indicated an abnormality in the engine starting system. Electric motor driven fire pump 76P-2, which is functionally redundant, was verified operable.

Troubleshooting of the diesel engine starting system revealed that the starter was drawing an abnormally high current when attempting to start the engine. Based on the observed high currents the decision was made to replace the starter. Since the spare parts system did not include a spare starter assembly, a new starter was obtained. The supplier indicated that the new starter was a "direct replacement" for the original starter.

When the new starter arrived at the plant site on March 8, 1990, it was found that while it was functionally and electrically the same as the original starter, a plant modification would be necessary to permit the actual installation. Differences in the electrical connections required the processing (writing, review, and approval) of a "design equivalent" modification which took into account physical differences in the electrical connections on the starter.

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TO: USNRC
FROM: WILLIAM FERNANDEZ
SUBJECT: SPECIAL REPORT TO ADDRESS
FIRE PUMP INOPERABILITY FOR
MORE THAN 8 DAYS

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Following approval of the design equivalent modification, the replacement starter was installed, the engine was started, and the fire pump tested. This action returned diesel engine driven fire pump 76P-1 to an operable status at 2310 hours on March 9, 1990. The total out of service time was 7 days, 13 hours, and 45 minutes.

Several days later during routine scheduled surveillance diesel engine driven fire pump 76P-1 again failed to start at 0445 hours on March 15, 1990. The functionally redundant electric motor driven fire pump was again verified to be operable and troubleshooting of the problem was initiated on the day shift. This troubleshooting revealed that starting system battery #1 voltage dropped from a nominal value of 24 VDC (27 VDC float voltage) to approximately 12 VDC when attempting to start the engine. When attempting to start the engine using the alternate battery (battery #2), the engine started normally and battery voltage only dropped to approximately 20 VDC while cranking the engine.

Based on observation of the low battery #1 voltage when under load, the battery was replaced with a new battery and the diesel engine driven fire pump was declared operable at 1215 hours on March 3, 1990. It had been out of service for 2 days, 7 hours, and 20 minutes.

No additional (future) problems with respect to replacing a failed starter within 7 days are expected to be incurred. In 1989 NYPA installed a second diesel engine driven fire pump of the same design which uses an exact replacement starter. This additional fire pump was installed to function as a back-up to the original fire pumps and was considered desirable due to expansion of fire protection services to new warehousing, training, sewage treatment, and interim radioactive waste storage facilities. The spare part system will include stocking of a replacement starter for use on either diesel engine driven fire pump.


WILLIAM FERNANDEZ

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cc: NRC Resident Inspector
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