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December 20, 2014

NL-13-166

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11545 Rockville Pike
Rockville, MD 20852

SUBJECT: Report on Inoperable Gross Failed Fuel Detector
Indian Point Unit Number 3
Docket No. 50-286
License No. DPR-64

Dear Sir or Madam:

The purpose of this letter is to submit a report pursuant to Technical Specification (TS) 5.6.7 for two channels of Gross Failed Fuel Detector (GFFD) inoperable for greater than the TS allowed completion time. TS 3.3.3 [Post Accident Monitoring (PAM) Instrumentation], Table 3.3.3-1, for Function 23, GFFD require two operable channels. The GFFD is provided to allow determination of reactor coolant system (RCS) radioactivity concentration and is satisfied by instrument loops R63A and R63B. The primary sample system provides sampling via RCS hot legs of RCS loop 1 and 3. The RCS sample is combined into a single sample line to feed Radiation Monitor R63A and R63B (GFFD) located outside containment. The combined sample line #59 for loops 1 and 3 penetrates containment with two air operated automatic containment isolation valves (CIV) (SP-AOV-956E and SP-AOV-956F) outside containment that are designed to fail closed on loss of power or air. The sample line is then routed to the GFFD through a globe valve SP-517 to a sample heat exchanger then to self regulating flow control valve FCV-505.

On December 12, 2013, at 20:37 hours, the control room was notified of the start of 3-PT-R074 (Reactor Coolant Accident Sampling System Integrity Test) and entered Technical Specification 3.3.3, Condition C (One or more functions with two required channels inoperable) for Function 23 (GFFD) due to RM R63A&B disabled for test. 3-PT-R074 completed satisfactorily at 23:30 hours, but but the Control Room remained in TS 3.3.3 Condition C due to inability to return the GFFD to service due to flow control valve SP-FCV-505 not operating properly. While returning the GFFD to service, valve SP-517 was throttled to increase flow but valve SP-FCV-505 would shut and isolate flow through the GFFD.

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GFFD is a TS Table 3.3.3-1 Function (#23). This condition exceeded the TS 3.3.3 Condition C allowed completion time of 7 days on December 19, 2013. TS 3.3.3 Condition D, required action and associated completion time of Condition C not met requires entry into TS 3.3.3, Table 3.3.3-1 for the channel. TS Table 3.3.3-1 Function 23 (GFFD) reference condition is Condition F. TS 3.3.3, Condition F requires a report be submitted to NRC within the next 14 days pursuant to TS 5.6.7. The report is to outline the alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrument to operable status.

- Alternate method of monitoring

The GFFD is isolated with the closure of valves SP-517 and SP-501. SP-AOV-956E and SP-AOV-956F are open which allows sampling through the normal sampling point (31 or 33 RCS hotleg sample line). Currently there is no change in the normal sampling lineup and sample frequency. If the RCS hot leg sample line were to be isolated, normal reactor coolant sampling to meet the reactor coolant chemistry and radiochemistry sampling requirements will be from the demineralizer inlet sample pathway. This will obtain all required analysis [Dose Equivalent Iodine (DEI) and Dose equivalent Xenon (DEX) analysis, cc/Kg dissolved hydrogen and anions (Cl, F, SO₄)]. During accident conditions, sampling reactor coolant will be from the recirculation sump when the plant reaches the conditions to go on internal recirculation.

- Cause

The cause of the failure of valve FCV-505 to operate properly is unknown. The condition was recorded in the Indian Point Corrective Action Program (CAP) as condition report CR-IP3-2013-04826.

- Plans and schedule for restoring

Valve FCV-505 is obsolete and there is no repair kit currently available to implement a repair. Work Order 358801 has been generated to replace valve FCV-505. A search is in-progress to identify and obtain an appropriate replacement valve. WO for valve replacement will be merged into the plant work schedule.

If you have any questions or require additional information, please contact me.

Sincerely,



RW/cbr

cc: Mr. Douglas Pickett, Senior Project Manager, NRC NRR
Mr. William M. Dean, Regional Administrator, NRC Region I
NRC Senior Resident Inspectors Office
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA
Mrs. Bridget Frymire, New York State Dept. of Public Service