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FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
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PLUNKETT,T.F. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-006-00:on 920610,discovered that recirculation of waste monitor tank,prior to liquid release,not conducted per TS & tank recirculated to less than one tank vol.Caused by overestimation of flow rate.Calibrs verified.W/920710 ltr.

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P.O. Box 029100, Miami, FL, 33102-9100

JUL 10 1992

L-92-195
10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Reportable Event: 92-006-00
Recirculation of Waste Monitor Tanks not in Accordance With Offsite Dose Calculational Manual Prior to Sample Acquisition.

The attached Licensee Event Report 250-92-006-00 is being provided in accordance with 10 CFR 50.73 (a)(2)(i)(B).

If there are any questions please contact us..

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Nuclear

TFP/JEK/jk

enclosures

cc: Stewart D. Ebneter, Regional Administrator, Region II, USNRC
Ross C. Butcher, Senior Resident Inspector, USNRC, Turkey Point Plant

IE22

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Turkey Point Unit 3	05000250	1 OF 3

TITLE (4) Recirculation of Waste Monitor Tanks not in Accordance With Offsite Dose Calculational Manual Prior to Sample Acquisition.

EVENT DATE (5)				LER NUMBER (6)			RPT DATE (7)				OTHER FACILITIES INV. (8)	
MON	DAY	YR		YR	SEQ #	R#	MON	DAY	YR		NAME	DOCKET # (S)
06	10	92		92	006	00	07	10	92		Turkey Point Unit 4	05000251

OPERATING MODE (2)	1	10 CFR 50.73(a)(2)(i)(B)
POWER LEVEL (10)	100	

LICENSEE CONTACT FOR THIS LER (12)

	TELEPHONE NUMBER
James E. Knorr, Regulation and Compliance Specialist	305-246-6757

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES	(If yes, complete EXPECTED SUBMISSION DATE)	NO X				

ABSTRACT (16)

On June 10, 1992, during a Quality Assurance audit of radiological liquid releases, Florida Power and Light personnel discovered that the recirculation of the waste monitor tank prior to liquid releases was not being conducted in the manner required by Technical Specifications.

Technical Specification 4.11.1.1.2 requires that an analysis be performed in accordance with the requirements of the Offsite Dose Calculation Manual (ODCM). ODCM section 2.2.1 requires that liquid waste in the waste monitor tank be isolated and recirculated for a minimum of one tank volume prior to sampling. Contrary to the ODCM the tank has been recirculated for somewhat less than one tank volume.

After the discovery and further evaluation, the recirculation time was changed to conservatively conform with the Technical Specification and ODCM.

The root cause appears to be an inadequate characterization of the pump and recirculation line capabilities and therefore overestimation of the recirculation flow rate.

I. DESCRIPTION OF THE EVENT

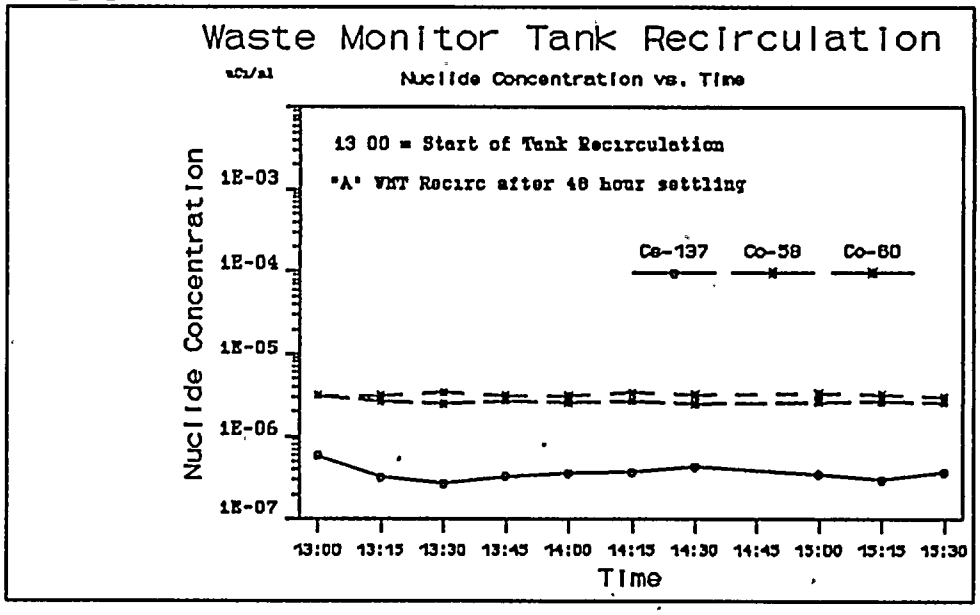
During an annual Quality Assurance audit of radioactive effluents, Florida Power and Light Personnel evaluated the recirculation time necessary to meet the requirements of the Offsite Dose Calculation Manual and Technical Specification 4.11.1.1.2. During the audit, flow rates and pressures existing during the recirculation process of the waste monitor tank (EIIS - WD IEEE - TK) were verified. The system characteristics were found to be approximately 72 gpm at 112 psig. The flow was expected to be 85 to 100 gpm. A pump curve created to reflect the system characteristics was found to be in error. The recirculation time for the system was required to be one tank volume by Chemistry Procedure 0-NCZP-061.2, "Waste Monitor Tank Sampling." The normal recirculation time was one hour. The waste monitor tank has a volume of 5000 gallons. Therefore, less than one volume was recirculated in one hour.

II. CAUSE OF THE EVENT

The root cause was the incorrect pump curve. The procedure used for the analysis of the tank volume required the tank to be recirculated for a minimum of one tank volume. The flow rate found during the audit, if used for one hour, would result in the recirculation of the equivalent of only one-half tank volume.

III. ANALYSIS OF THE EVENT

Following the discovery of the flow discrepancy, chemistry personnel performed a mixing analysis of the tank concentration. The tank was allowed to settle for 48 hours. A sample was taken prior to the beginning of a mixing of the tank by recirculation as normally performed. Further samples were taken each 15 minutes for the following 2 hours. The graph on the right shows the result of that test. Virtually no concentration change occurred after 15 minutes.



The measurable nuclides contents of the tank appear to be colloidal in nature and reach equilibrium within 15 minutes of the beginning of the recirculation process. Therefore little recirculation time is required to obtain a representative sample of the tank contents.

Additionally, the response history of the process radiation monitor (R-18) for this effluent stream has shown no abnormally high readings.

IV. CORRECTIVE ACTIONS

1. The immediate corrective action was to double the recirculation time of the waste monitor tank volume to two hours to insure that one tank volume was turned over prior to sampling. This time was based upon the empirical data collected during the verification of the flow in the recirculation line during the recirculation process in accordance with Temporary Procedure TP-845.

2. Operating procedure 0-NCOP-003 has been revised to require logging pump discharge pressure, start time and sample time during the liquid release process. This will assure adequate recirculation time. Further investigation will be conducted on an additional recirculation line with flow indication. If adequate flow is possible through the recirculation line with flow indication, the line will be incorporated as an option in OP 5163.3 for use during tank recirculation.

3. The pressure, and flow instrument calibrations for the waste monitor tank recirculation system have been verified.

4. The monitor tank is also used to hold radioactive water prior to release. The flow rate for recirculation of the monitor tank volume prior to obtaining a sample was verified using Temporary Procedure TP-845. The flow rate is adequate to achieve a recirculation of one tank volume in the procedurally required two hours of recirculation time.

5. Safety related pump characteristics are all tested and monitored for change and meeting analyzed acceptance criteria as part of the Inservice Testing Program.

V. ADDITIONAL INFORMATION

No similar LERs have been identified.