FPL

NOV 0 6 2000

L-2000-238
10 CFR § 50.73

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

Re: Turkey Point Unit
Docket No. 50-251
Reportable Event: 2000-003-00
Date of Event: October 5, 2000
Emergency Containment Filter Charcoal
Failure to Meet Surveillance Acceptance Criteria

The attached Licensee Event Report 2000-003 is being submitted pursuant to the requirements of 10 CFR § 50.73 to provide notification of the subject event.

Very truly yours,

R. J. Hovey
Vice President
Turkey Point Nuclear Plant

RJH/SF/DRL
Attachment

cc: Regional Administrator, USNRC, Region II
Senior Resident Inspector, USNRC, Turkey Point Nuclear Plant

IE22

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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TITLE (4)

Emergency Containment Filter Charcoal Failure to Meet Surveillance Acceptance Criteria

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	05	2000	2000	- 003 -	00	11	06	2000	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5
POWER LEVEL (10)	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)	x	50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Lafleur, David	(305) 246 - 7150

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
B	JE	FLT	B075	Y	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

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

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)* **(16)**

On October 5, 2000, during the Florida Power and Light (FPL) Turkey Point Unit 4 refueling outage, it was reported to FPL that charcoal samples from the 4A, 4B, and 4C Emergency Containment Filters (ECFs) did not meet the acceptance criteria as specified in Technical Specification 4.6.3.b.2 of less than 35% penetration of methyl iodide. The cause of the charcoal failing its penetration test appears to be the age of the charcoal, combined with the application of a more stringent charcoal test method. FPL replaced the charcoal in the 4A, 4B, and 4C ECF with new charcoal which meets the stated performance requirements of Technical Specification 4.6.3.b.2 prior to Unit 4's entry into Mode 4.

The removal efficiency of the tested charcoal was above the 30% removal efficiency for methyl iodide required by Section 6.3.1 of the Updated Final Safety Analysis Report. Therefore, the design function of the ECFs could still be accomplished and the offsite dose would not exceed the 10 CFR 100 guidelines. The reduced efficiency of the charcoal would not have adversely affected the health and safety of the public.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

Description of the Event

On October 5, 2000, during the FPL Turkey Point Unit 4 refueling outage, it was reported to FPL that charcoal samples from the 4A, 4B, and 4C Emergency Containment Filters (ECFs) [JE:FLT] did not meet the acceptance criteria as specified in Technical Specification 4.6.3.b.2 of less than 35% penetration of methyl iodide.

Technical Specification 3.6.3 requires that three ECFs shall be operable in Modes 1 through 4. Surveillance Requirement 4.6.3 requires that each ECF be demonstrated operable by "... b. At least once per 18 months... (2) Verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with applicable portions of Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and performed in accordance with ASTM D3803-1989 at 30 °C and 95% relative humidity, meets the methyl iodide penetration criteria of less than 35%; and that any charcoal failing to meet this criteria be replaced with charcoal that meets or exceeds the stated performance requirement."

Charcoal samples were obtained from the 4A, 4B, and 4C ECFs and shipped for laboratory analysis on September 30, 2000. The vendor completed the analyses on October 4, 2000. The plant received and reviewed the results on October 5, 2000, and initiated a response through the plant's corrective action program on that date. The following results were obtained:

Filter	Removal Efficiency (%)	Penetration (%)	Std Deviation (%)
4A	59.361	40.639	0.126
4B	50.263	49.737	0.137
4C	51.445	48.555	0.143

Unit 4 was in Mode 5 and the ECFs were not required to be operable in this mode. All charcoal was replaced with new charcoal, which met the stated performance requirement prior to Unit 4's entry into Mode 4.

This condition is reported under 10 CFR 50.73 (a)(2)(i)(B) as a condition prohibited by Technical Specifications. As stated in NUREG-1022, Rev. 1, Event Reporting Guidelines 10 CFR 50.72 and 50.73, the existence of similar discrepancies in multiple components of the same type is an indication that the discrepancies arose over a period of time. Therefore, the condition is considered to have existed during plant operation.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

Cause of the Event

The cause of the charcoal failing its penetration test appears to be the age of the charcoal, combined with the application of a more stringent charcoal test method.

Analysis of the Event

The tested charcoal had been installed in the ECFs for greater than 15 years. Prior to this outage, the charcoal was tested in accordance with ANSI N-510-1975, at 130 °C, to meet the acceptance criteria of greater than 99.9% removal efficiency for elemental iodine. The Technical Specifications were recently updated in accordance with Generic Letter 99-02, Laboratory Testing of Nuclear-Grade Activated Charcoal, to the current criteria of less than 35% methyl iodide penetration at 30 °C, when tested in accordance with ASTM D3803-1989. This outage was the first time the Unit 4 ECF charcoal had been tested in accordance with ASTM D3803-1989.

Charcoal can degrade when subjected to paint or welding fumes, smoke or other types of chemical releases. However, exposure of the charcoal to such contaminants is highly unlikely. To prevent inadvertent exposure, the ECF charcoal filter banks are shielded upon unit shutdown and then inspected by the engineering staff to confirm adequate shielding. In addition, procedural prerequisites exist to ensure that no contaminants could affect filter efficiency during ECF system performance testing. Thus, operational exposure to these contaminants is not considered to be a likely contributor to the degraded performance results.

Analysis of Safety Significance

Chapter 6.3 of the Turkey Point Updated Final Safety Analysis Report (UFSAR) states that the design basis of the ECF System is to "reduce the iodine concentration in the containment atmosphere following a MHA (Maximum Hypothetical Accident) to levels ensuring that the offsite dose will not exceed the guidelines of 10 CFR 100 at the site boundary." Section 6.3.1 of the UFSAR requires a 30% removal efficiency to ensure the design basis is met. The Technical Specifications incorporate a safety factor of greater than 2 to assure that the requirements of the safety analysis, as stated in the UFSAR are met. The removal efficiency of the tested charcoal was above the 30% removal efficiency for methyl iodide. Therefore, the design function of the ECFs could still be accomplished and the offsite dose would not exceed the 10 CFR 100 guidelines. The reduced efficiency of the charcoal would not have adversely affected the health and safety of the public.

Corrective Actions

The charcoal in the 4A, 4B, and 4C ECF was replaced with new charcoal in accordance with Technical Specification 4.6.3.b.2 prior to Unit 4's entry into Mode 4.

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TEXT CONTINUATION

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

Additional Information

Turkey Point has experienced no similar events. Unit 3 ECFs charcoal was tested in March, 2000, and significantly exceeded the penetration criteria using the new test method with an average penetration of 3.2%.

EIIS Codes are shown in the format [EIIS System:IEEE component function identifier, second component function identifier (if appropriate)].