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FACIL:50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina 05000400
AUTH.NAME AUTHOR AFFILIATION
ROBINSON,W.R. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Special rept:on 930928,identified that 10 used incore detectors not accounted for.Most probable disposition is that detectors inadvertently mixed w/other LLW matl & shipped to SEG in Apr 1993.Procedures FMP-108 & 108 revised.

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TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Application for permit renewal filed. 05000400

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CP&L
Carolina Power & Light Company
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

OCT 27 1993

Letter Number: HO-930195

U.S. Nuclear Regulatory Commission
ATTN: NRC Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT UNIT 1
DOCKET NO. 50-400
LICENSE NO. NPF-63
30 DAY WRITTEN FOLLOW-UP REPORT

Gentlemen:

In accordance with Title 10, Parts 20 and 70 of the Code of Federal Regulations, the enclosed Written Follow-up Report is submitted. This report fulfills the requirement for a written follow-up report within thirty (30) days for missing Special Nuclear Material per 10CFR20.2201 and within thirty (30) days following a loss of Special Nuclear Material per 10CFR70.52. This report is in accordance with the format and content requirements set forth in the above parts as well as Title 10 Part 50.73.

Very truly yours,

W. R. Robinson
General Manager
Harris Nuclear Plant

MV:

Enclosure

cc: Mr. S. D. Ebneter (NRC - RII)
Mr. N. B. Le (NRC - PM/NRR)
Mr. J. E. Tedrow (NRC - SHNPP)

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NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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.

SPECIAL REPORT

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Shearon Harris Nuclear Plant-Unit #1	05000/400	1 OF 3

TITLE (4) 30 Day Written Follow-up Report for the loss of ten (10) used Incore Detectors (Special Nuclear Material).

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
9	28	93		N/A		10	27	93	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1
POWER LEVEL (10)	100%

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

X	20.402(b)	20.405(c)	50.73(a)(2)(iv)		73.71(b)
	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)		73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)		OTHER
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)		
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Michael Verrilli	(919) 362-2303

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

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 September 28, 1993, during efforts to consolidate radioactive material for a future burial shipment, Health Physics personnel identified that ten (10) used incore detectors were not accounted for in the designated radioactive waste storage areas. These detectors utilize a fission chamber containing enriched Uranium 235, which classifies them as Special Nuclear Material (SNM). The combined SNM weight contained in the missing detectors is approximately 0.03 grams. An extensive search was conducted over the next four days, including a trip to the contracted low-level waste processing facility, S.E.G. in Oak Ridge Tennessee, but the detectors were not found. On October 4, 1993, a meeting was conducted to ensure that all possible efforts to locate the detectors had been exhausted. A conclusion was reached that a loss of non-fuel Special Nuclear Material (SNM) had occurred. The root cause of this event was a lack of accountability on the part of the SNM custodian designee. This included performing a paperwork, vice physical six-month inventory, poor maintenance of SNM records and not properly marking/segregating non-fuel SNM. There was also a lack of knowledge/training among various work groups on what non-fuel SNM means and it's importance. Corrective actions included assignment of a new SNM custodian designee, development of labeling for SNM to distinguish it from other radioactive material, designation of separate locked storage areas for non-fuel SNM, development of access controls and clear posting for the non-fuel SNM storage areas, and revising the SNM inventory procedure. Additional actions will include a revision to the SNM accountability procedure and training for applicable personnel.

The most probable disposition scenario is that this material was inadvertently mixed with other low-level radwaste and was shipped to S.E.G. in Oak Ridge Tennessee in April 1993.

DESCRIPTION OF MATERIAL INVOLVED:

The Special Nuclear Material involved in this event is enriched Uranium 235 (and decay products), which is utilized in the incore detector's fission chamber. The combined SNM weight of the ten missing detectors is approximately 0.03 grams.

DESCRIPTION OF CIRCUMSTANCES UNDER WHICH LOSS OCCURRED:

On September 28, 1993, during efforts to consolidate radioactive material for a future burial shipment, Health Physics personnel identified that ten (10) used incore detectors were not accounted for in the designated radioactive waste storage areas. These detectors utilize a fission chamber containing enriched Uranium 235, which classifies them as Special Nuclear Material (SNM). The combined SNM weight contained in the missing detectors is approximately 0.03 grams. An extensive search was conducted over the next four days, including a trip to the contracted low-level waste processing facility, S.E.G. in Oak Ridge Tennessee, but the detectors were not found. On October 4, 1993, a meeting was conducted to ensure that all possible efforts to locate the detectors had been exhausted. A conclusion was reached that a loss of non-fuel Special Nuclear Material (SNM) had occurred. The root cause of this event was a lack of accountability on the part of the SNM custodian designee. This included performing a paperwork vice physical six-month inventory, poor maintenance of SNM records and not properly marking/segregating non-fuel SNM. There was also a lack of knowledge/training among various work groups on what non-fuel SNM means and it's importance. Corrective actions included assignment of a new SNM custodian designee, development of labeling/tagging for SNM to distinguish it from other radioactive material, designation of separate locked storage areas for non-fuel SNM, development of access controls and clear posting for the non-fuel SNM storage areas, and revising the SNM inventory procedure. Additional actions will include a revision to the SNM accountability procedure and training for applicable personnel.

DISPOSITION OF MATERIAL:

Based on a review of the above listed circumstances and sequence of events, the most probable disposition of the ten incore detectors is that it was inadvertently mixed with other low-level radwaste material while in storage in WPB room 144A, then shipped to SEG in April of 1993 for processing prior to burial.

RADIATION EXPOSURES TO INDIVIDUALS IN UNRESTRICTED AREAS:

Based on the fact that the incore detectors had low radiation levels and that they were handled as low-level radwaste, no exposures to personnel in unrestricted areas occurred as a result of this event.

ACTIONS TAKEN (or will be taken) TO RECOVER THE MATERIAL:
An extensive search was conducted in all plant areas that the used incore detectors could reasonably have been placed. A trip was also made to SEG's facility in Oak Ridge Tennessee to search the remaining radwaste material received from HNP that had not been incinerated. Based on the conclusion that the material was processed by SEG, no further actions will be taken to locate the detectors.

PROCEDURES OR MEASURES WHICH HAVE BEEN (or will be) ADOPTED TO PREVENT RECURRENCE:

1. A new Special Nuclear Material Custodian Designee was assigned.
2. Labeling/tagging for non-fuel SNM has been created to ensure that it will be distinguished from other radioactive materials.
3. Separate locked storage areas for non-fuel SNM have been designated.
4. Access controls and clear postings for the non-fuel SNM storage areas have been developed.
5. FMP-108 (governing procedure for conducting SNM inventory) has been revised to specifically define SNM inventory requirements.
6. Revise FMP-109 (SNM Accountability Plan/Procedure) to clearly delineate HP/Maint/Stores/Deconners responsibilities regarding SNM. This shall include the requirement for a "pre-job" briefing prior to SNM transfer activities and specific guidance on the completion of the transfer form.
7. The review and approval process for SNM procedures (FMP-108 & FMP-109) has been changed to include all affected organizations.
8. Provide training on the above listed actions for applicable personnel.
9. Perform a follow-up review to assess the effectiveness of above corrective actions.

This condition is being reported per 10CFR20.2201(a)(ii) and 10CFR70.52(b) to satisfy the requirement for a written follow-up report within 30 days.