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R. E. DENTON
GENERAL MANAGER
CALVERT CLIFFS

March 30, 1992

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2; Docket Nos. 50-317 and 50-318;
License Nos. DPR 53 and DPR 69
Licensee Event Report 92-001

Gentlemen:

The attached report is being sent to you as required under 10 CFR 50.73 guidelines. Should you have any questions regarding this report, we will be pleased to discuss them with you.

Very truly yours,

RWarnick for RE Denton

RED/DWM/bjd
Attachment

cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
R. A. Capra, NRC
D. G. McDonald, Jr., NRC
T. T. Martin, NRC
P. R. Wilson, NRC
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Director, Office of Management Information
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IE22

NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Calvert Cliffs, Unit 1	0 5 0 0 0 3 1 7	1 OF 0 5

TITLE (4) Fuel Moved in Spent Fuel Pool While Ventilation System Out of Service Due to Maintenance Order Process Problems

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 NAMES	DOCKET NUMBER(S)
0 2	2 9	9 2	9 2	0 0 1	0 0	0 3	3 0	9 2	Calvert Cliffs, Unit 2	0 5 0 0 0 3 1 8
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	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 (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		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
	AREA CODE
D. W. Muth, Compliance Engineer	4 1 0 2 6 0 - 3 5 9 2

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 fifteen single-space typewritten lines) (16)

On February 11, 1992, the Spent Fuel Pool (SFP) Ventilation System High Efficiency Particulate Air filters were replaced. The Maintenance Order (MO) under which the replacement was performed was closed out without an adequate Post Maintenance Test being performed. On February 22, 1992, fuel was moved in the SFP, an action prohibited by Technical Specification 3.9.12.b when the SFP ventilation system is inoperable. There were no safety consequences or significance associated with this event.

The root causes of this event were a set of weaknesses in the MO process. These included a lack of understanding of the responsibilities associated with Post Maintenance Testing, problems with change management, insufficient reference materials, and personnel error on the part of the Control Room Supervisor in declaring the system OPERABLE when it had not been fully tested.

Maintenance planners have been reminded to list all required post maintenance testing as steps required for MO closure. Operations personnel have been briefed on the particulars of this event and reminded of the need for a questioning attitude when closing out maintenance work. Operations and Maintenance personnel will be provided with a cross reference of equipment to surveillance requirements and Surveillance Test Procedures for use as a reference tool.

I. DESCRIPTION OF EVENT

On February 11, 1992, the Spent Fuel Pool (SFP) Ventilation System High Efficiency Particulate Air (HEPA) filters were replaced. The Maintenance Order (MO) under which the replacement was performed was closed out without an adequate Post Maintenance Test being performed. On February 22, 1992, fuel was moved in the SFP, an action prohibited by Technical Specification 3.9.12.b when the SFP ventilation system is inoperable.

On January 17, 1992 a Maintenance Request was written to have the SFP HEPA filters changed out due to a high differential pressure. An MO was issued and on February 10, 1992 the filters were changed out. In accordance with the procedure governing filter replacement, the Mechanical Maintenance mechanic supervising the work contacted the Test Equipment Unit to perform the required Post Maintenance Test on the filter bank. Technical Specification 4.9.12.e requires that, after full or partial replacement of a SFP HEPA filter bank, the bank shall be tested in-place to verify that it removes at least 99 percent of dioctyl phthalate (DOP). This test, however, was not listed as Post Maintenance Test work required to close out the MO. The Supervisor, Test Equipment rescheduled the testing to February 29, 1992 to support an upcoming outage. At the time of discovery, both units were in MODE 1 at normal operating temperature and pressure.

On February 11, 1992 the MO was statused "work complete" and passed on to the Control Room Supervisor (CRS) for final closeout. The CRS requested that an air flow test be run. The HEPA filter DOP test was not conducted. Upon successful completion of the flow test, he declared the SFP Ventilation System OPERABLE and closed out the MO. The air flow test ordered by the CRS did not include the in-place DOP test.

Between February 22 and 26, 1992 Fuel Management personnel used the Spent Fuel Handling Machine to grapple fuel assemblies and raise them up to their upper electrical limit. Since the SFP Ventilation System had not been surveilled in accordance with Technical Specification 4.9.12.e and was therefore inoperable, this movement of spent fuel in the SFP was prohibited by Technical Specification 3.9.12.b.

On February 29, 1992 the Test Equipment Unit supervisor informed the Shift Supervisor that he had not performed the in-place DOP test to verify operability of the HEPA filters. The Shift Supervisor declared the SFP Ventilation System inoperable and entered the appropriate ACTION Statement. The required testing was satisfactorily performed and the ventilation system returned to service the same day.

II. CAUSE OF EVENT

The root causes of this event were a set of weaknesses in the MO process. These included a lack of understanding of the responsibilities associated with Post Maintenance Testing, problems with change management, insufficient reference materials, and personnel error on the part of the CRS in declaring the system OPERABLE when it had not been fully tested.

The personnel involved in this event did not fully understand the MO process' definition of or individual responsibility for Post Maintenance Testing and operability testing. The MO process requires the Maintenance Planner and Mechanical Supervisor to identify and recommend Post Maintenance Testing and the Operations Post Maintenance Test Coordinator (PMTC) or CRS to determine appropriate operability testing for the actual maintenance activity. At the time this job was planned, it was not clear to the Maintenance personnel that the testing they recommended would be heavily relied on by Operations in declaring the equipment OPERABLE. Maintenance expected Operations to identify whatever tests were required to assure Technical Specification operability of the equipment. Operations understood the meaning of "operability test" to be a test performed by Operations to ensure the equipment would be operable with respect to Operations surveillance procedures, but not necessarily meet all Technical Specification requirements. Operations expected Maintenance to identify and perform part of the testing required to assure operability of the equipment per the Technical Specifications and did not verify Maintenance's work.

Previously, Maintenance tasks were performed under separate, discipline-specific MOs and support MOs. Last summer, this system was changed to one in which a single MO covers all steps needed to perform a job. The Mechanical Maintenance personnel involved in this event were not fully aware of the implications of this change and hence took an overly parochial approach to planning the HEPA filter replacement. Both the mechanical maintenance planner and the Mechanical Maintenance Supervisor recognized the need for the DOP test but, since differential pressure measurement is the only required test that can be performed by mechanical maintenance, listed only the differential pressure measurement as recommended Post Maintenance Testing. Under the previous system, the testing not performed by Mechanical Maintenance would have been tracked by a support MO. The present system requires all recommended Post Maintenance Testing to be identified as such. Since the DOP test was not identified as recommended Post Maintenance Testing on the MO, the MO was closed out prior to its accomplishment.

The CRS reviewing and closing out this MO did not verify that the correct testing was performed prior to declaring the SFP Ventilation System OPERABLE. A contributor to this error was lack of reference materials. Neither Operations nor Maintenance personnel were provided with reference material identifying the surveillance requirements and Surveillance Test Procedures associated with a

given component. The MO process hence relied too heavily on individual memory and experience.

III. ANALYSIS OF EVENT

There were no safety consequences or significance associated with this event as the HEPA filters were fully capable of performing their intended function if called upon. This was verified by satisfactory performance of the in-place DOP test on February 29, 1992.

This item is reportable under the requirements of 10 CFR 50.73(a)(2)(i)(b) as a condition prohibited by Technical Specifications.

IV. CORRECTIVE ACTIONS

1. Maintenance management has reemphasized to the maintenance planners the procedural requirement to recommend all Technical Specification required testing, including those tests performed by other Maintenance disciplines and/or Operations, in the MOs they are planning.

2. Operations management emphasized to the PMTC their expectation that this work group will review all MO post maintenance testing, including that performed by Maintenance, for adequacy with regard to Technical Specification operability.

3. Operations management briefed all operators on this event and emphasized to them the need for a questioning attitude when closing out MOs.

4. Operations and Maintenance personnel will be provided with a cross reference of equipment to surveillance requirements and Surveillance Test Procedures for use as a reference tool.

5. Investigations into both the process (including change management) and human factors problems in this event is ongoing. We will implement the appropriate recommendations from these reviews.

V. ADDITIONAL INFORMATION

A. Affected Component Identification:

	IEEE 803 EIIS Funct	IEEE 805 System ID
SFP HEPA Filter	FLT	VG
Spent Fuel Handling Machine	FHM	DF

B. Previous Similar Events:

There have been no events reported under 10 CFR 50.73 involving similar problems with the MO process.