CENTERIOR ENERGY

PERRY NUCLEAR POWER PLANT
10 CENTER ROAD
PERRY, OHIO 44081
(216) 259-3737

Mail Address:
P.O. BOX 97
PERRY, OHIO 44081

Robert A. Stratman
VICE PRESIDENT - NUCLEAR

February 23, 1994
PY-CEI/NRR-1747 L

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

Perry Nuclear Power Plant
Docket No. 50-440
LER 93-016-01

Gentlemen:

Enclosed is Revision 1 to Licensee Event Report 93-016, "Missed Surveillance Requirements for Charcoal Sampling of Required Ventilation Systems Due to An Inadequate Program Resulting in Technical Specification Violations." This revision is submitted to update information identified during an evaluation of historical data. Revised sections of the LER are indicated by a revision bar in the right hand margin.

If you have questions or require additional information, please contact Henry Hegrat - Regulatory Affairs, at (216) 280-5606.

Very truly yours,

RAS:DAH:sc

Enclosure: LER 93-016-01

cc: NRC Project Manager
NRC Resident Inspector
NRC Region III

280012

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

IE22 1/1

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.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Perry Nuclear Power Plant, Unit 1	05000 440	1 OF 5

TITLE (4) Missed Surveillance Requirements for Charcoal Sampling of Required Ventilation Systems Due to Inadequate Program Results in Technical Specification Violations

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
08	25	93	93	-- 016 --	01	02	23	94	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)

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)	X 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)
Denzel A. Housley, Compliance Engineer Extension 5520	(216) 259-3737

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 August 25, 1993, it was discovered that fuel handling activities had been performed on August 9, 1993 without three Fuel Handling Building (FHB) ventilation exhaust subsystems operable in violation of Technical Specifications 3.7.7.1 and 3.7.7.2. Subsequent to the initial reporting of this event, an evaluation was performed which identified several times in the past where the charcoal sampling surveillance requirement for the FHB ventilation exhaust system, the Annulus Exhaust Gas Treatment system, and the Control Room Emergency Ventilation system had not been completed within the surveillance time requirements for these three systems.

The cause of this event was an inadequate program to ensure that the charcoal sampling requirements of Technical Specifications were correctly met. The instruction that tracks operating time of the ventilation systems did not identify the surveillance limit for completing the charcoal sampling.

The corrective actions that will be taken include a revision to the appropriate plant instruction which tracks the surveillance interval for these ventilation systems and training for licensed personnel on this event.

I. Introduction

On August 25, 1993, it was discovered that fuel handling activities had been performed on August 9, 1993 without three Fuel Handling Building (FHB) ventilation exhaust subsystems [VG] operable in violation of Technical Specifications 3.7.7.1 and 3.7.7.2. At the time of this event, the plant was in Operational Condition 1 at 100% rated thermal power. The reactor pressure vessel (RPV) was at 1027 psig and saturated conditions. This failure to ensure operability of the FHB Ventilation System prior to performing fuel handling activities is being reported pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

II. Description of Event

Technical Specification 3.7.7.1 requires at least three FHB ventilation exhaust subsystems to be operable when irradiated fuel is being handled in the FHB. Surveillance requirement 4.7.7.1.c for this Technical Specification requires that a representative charcoal sample be removed (and analyzed within 31 days) after every 720 hours of charcoal adsorber operation. Technical Specification 3.7.7.2 requires FHB integrity to be maintained when irradiated fuel is being handled in the FHB.

On August 25, 1993, it was discovered that charcoal sampling of the FHB ventilation exhaust system for trains A & B had not been performed within the required surveillance interval prior to the time they were required to be operable during handling of irradiated fuel on August 9, 1993.

Personnel established all other requirements for FHB Integrity on August 7, 1993, not recognizing that the surveillance requirements for the FHB ventilation exhaust system had not been satisfied. Thus three FHB ventilation exhaust trains were not operable on August 9, 1993 when fuel handling activities (fuel sipping) were performed. This violated both Technical Specifications 3.7.7.1 and 3.7.7.2. Fuel sipping proceeded from 1350 to 1750 hours on August 9 and the fuel sipping equipment was removed from the FHB pools between 1800 and 1830 hours on August 10, after which FHB integrity was relaxed. This event was not recognized as a Technical Specification violation until August 25, 1993. At that time, FHB integrity was not required.

Following identification of this violation, a Daily Instruction was written requiring that a Priority 2 Work Order (WO) be initiated upon reaching 720 hours of charcoal adsorber operation. Priority 2 WOs require that the necessary resources be applied 24 hours per day to achieve completion at the earliest possible time. Additionally, the B train charcoal sample was pulled on August 24, and the A train sample was pulled on August 27. Both samples were analyzed with satisfactory results.

NRC Notice of Violation (NOV) 50-440/93017-01 was received on September 24, 1993 concerning this event. A corrective action in the response to the NOV stated that an evaluation would be performed to analyze historical data for the the annulus exhaust gas treatment system (AEGTS) [BH] and the control room emergency ventilation system (CREVS) [VI] to determine if representative charcoal samples had been taken within the required Technical Specification interval. Both of these systems have Technical Specification surveillance requirements that are identically worded to the FHB ventilation exhaust system which requires a representative carbon sample to be obtained (and analyzed within 31 days) after every 720 hours of charcoal adsorber operation. The affected Technical Specifications for the AEGTS and CREVS are 3.6.6.2 and 3.7.2, respectively.

This evaluation identified several times in the past where charcoal sampling for the FHB ventilation exhaust system, AEGTS, and CREVS had not been completed within the 900 hour surveillance time requirement (720 hour plus the 25% extension allowed by Technical Specification 4.0.2) for these three systems. Since these missed surveillance requirements were not identified at the time of occurrence, appropriate reviews were not performed when the sampling interval exceeded 900 hours of charcoal operation and, therefore, compliance to the required Technical Specification was not ensured.

III. Cause of Event

The cause of this event was initially determined to be personnel error, inattention to detail. As the result of the additional missed surveillances identified since this event was originally reported, the cause of this event has been re-evaluated and determined to be an inadequate program to ensure that the charcoal sampling requirements of Technical Specifications were correctly met.

The charcoal sampling frequency for the FHB ventilation exhaust system, AEGTS, and CREVS is tracked in accordance with Plant Round Instruction PRI-TSR, "Technical Specification Rounds," by recording operating times for each ventilation train every shift. The Technical Specification Rounds data sheets require that at 720 hours total operating time, a Potential LCO (PLCO) tracking sheet be generated and a Work Request to sample the charcoal initiated. Although the Technical Specification Rounds is intended to ensure operability of the associated trains of the charcoal systems with respect to Technical Specification charcoal sampling frequency, an operating limit of 900 hours is not provided to ensure that the train is declared inoperable if sampling has not been performed.

Contributing to the missed surveillances was a misinterpretation of the associated surveillance requirement by the Operations section. The 720 hour sampling frequency was not recognized as a surveillance frequency which required charcoal sampling within 1.25 times the surveillance interval. Therefore, when the PLCO tracking sheet was initiated, the 900 hour surveillance limit was not recognized nor listed.

IV. Safety Analysis

The FHB ventilation system continuously supplies clean, filtered and heated outside air to the various areas of the fuel handling building. Additionally, the system removes and processes potentially contaminated air, thus providing adequate ventilation and limiting the release of radioactive isotopes to the outside air. The system consists of two 100% capacity supply fans and three 50% capacity exhaust fans. Exhaust air passes through a HEPA prefilter, a charcoal filter and a HEPA after filter before being discharged through the monitored Unit 1 plant vent. The design efficiency of the charcoal is 99.9% for elemental iodine and 95% for methyl iodine. Technical Specifications require periodic testing to verify methyl iodide penetration of less than 1% to ensure satisfactory design compliance. Although the specific deadlines for this most recent testing were missed, the late samples were all verified to have a methyl iodide penetration of less than 1%. Therefore, these filters were capable of performing their design function during the period FHB Integrity was required and this event is not considered to be safety significant.

The AEGTS and CREVS similarly use charcoal filters to remove iodine during design basis events from the air exiting the annulus (AEGTS) and the air supplied to the Control Room (CREVS). An evaluation of safety significance of the additional identified late samples for the FHB ventilation system, the AEGTS, and the CREVS was performed. The test results of these late samples were compared to the calculation values utilized in the accident analyses and determined to have no effect. Therefore, this event was not safety significant.

V. Similar Events

Previous LERs have been submitted due to missed surveillance requirements and other events have involved the misinterpretations of actions required to be taken by Technical Specifications. These LERs resulted in single events where Technical Specification requirements were not taken and/or involved misinterpretations by one operating crew. This event is the first identified event where the surveillance requirement of a Technical Specification had been generally misunderstood and not correctly applied over an extended period of time.

VI. Corrective Actions

As a result of this event, the following corrective actions have been, or will be performed.

1. The Technical Specification Rounds data sheets in PRI-TSR have been revised to require a priority 2B Work Order to be initiated when operating time reaches 720 hours. This priority WO will help ensure that a sample is taken prior to exceeding the surveillance interval.

2. The interpretation for the affected Technical Specification surveillance requirements has been formally documented by memorandum from the Licensing section to the Operations section.

3. The surveillance limit of 900 hours will be incorporated into the appropriate Technical Specification Rounds data sheets in PRI-TSR that track run times of the FHB ventilation exhaust system, the AEGTS, and the CREVS.

4. This event along with the Technical Specification interpretation provided by the Licensing section will be reviewed by licensed personnel during requalification training.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].