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Byron Generating Station
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Byron, IL 61010-9794
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September 29, 2000

LTR: BYRON 2000-0141
File: 3.03.0800

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Byron Station, Unit 1
Facility Operating License No. NPF-37
NRC Docket No. STN 50-454

Subject: Licensee Event Report (LER) 454-2000-002-00

Enclosed is an LER concerning an error in the verification of a Technical Specification surveillance requirement for the Main Control Room Ventilation System. This event is reportable to the NRC in accordance with 10 CFR 50.73 (a)(2)(i)(B).

If you need any additional information concerning this report, please contact Ms. P. Reister, Regulatory Assurance Manager, at (815) 234-5441, ext. 2280.

Sincerely,

A handwritten signature in black ink, appearing to read "William Levis", with a stylized flourish at the end.

William Levis
Site Vice President
Byron Station

WL/JL/dpk

Enclosure: Byron Station Unit 1 LER 454-2000-002-00

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Byron Station

IE 22

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. 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

FACILITY NAME (1) Byron Station, Unit 1

DOCKET NUMBER (2) STN 05000454

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TITLE (4) Acceptance Criteria for the Control Room Ventilation System Train Monthly Surveillance Not Met Due to Human Performance Error

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
06	15	2000	2000	- 002	- 00	09	29	2000	Byron, Unit 2	STN 05000455
OPERATING MODE (9) MODE 1			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10) 100			<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)		<input type="checkbox"/> 50.73(a)(2)(iii)		<input type="checkbox"/> 73.71(b)		
			<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(iv)		<input type="checkbox"/> 73.71(c)		
			<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 20.2203(a)(4)		<input type="checkbox"/> 50.73(a)(2)(v)		<input type="checkbox"/> OTHER		
			<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)		<input type="checkbox"/> 50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)		
			<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)				
			<input type="checkbox"/> 20.2203(a)(2)(iv)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)		<input type="checkbox"/> 50.73(a)(2)(viii)(B)				
			<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(ii)		<input type="checkbox"/> 50.73(a)(2)(x)				

LICENSEE CONTACT FOR THIS LER (12)

NAME
Penny Reister, Regulatory Assurance Manager

TELEPHONE NUMBER (Include Area Code)
(815) 234-5441 X2280

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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) X NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines 16)

On August 30, 2000, it was discovered that the June 15, 2000, performance of the Control Room Ventilation System (VC) Train 0B Monthly Surveillance was inappropriately approved without meeting the required acceptance criteria of a continuous fan run time of 10 hours. A licensed operator performing the surveillance procedure made a subtraction error in beginning and ending clock times recorded in the procedure. The end time recorded was actually 50 minutes less than the minimum time required. The subsequent supervisor review of the procedure failed to identify the error. The VC fan was not shut down until well after the recorded end time; however, a search for other means to verify the exact stop time of the VC fan was unsuccessful. Consequently, the surveillance requirement could not be objectively verified. The root causes were determined to be a human performance error on the part of the licensed operator and a failure by Operations management to establish clear expectations for supervisory review of completed surveillance procedures. Contributing causes include poor self-checking and incomplete turnover information. Corrective actions include counseling the individual and providing clear expectations for performing the supervisory review of surveillances. Other corrective actions include improvements in turnover information, and better utilization of the department surveillance coordinator. There were no adverse safety consequences with this event. This event is reportable to the NRC in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

NRC FORM 366A (4-95)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98		
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION				ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT		
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(If more space is required, use additional copies of NRC Form 366A)(17)

A. Plant Conditions Prior to Event:

Event Date/Time: June 15, 2000/1041 hours

Unit 1 - Mode 1 - Power Operations, Reactor Power: 100%

Reactor Coolant System [AB]: Temperature/Pressure - Normal operating temperature and pressure.

Unit 2 - Mode 1 - Power Operations, Reactor Power: 100%

Reactor Coolant System [AB]: Temperature Pressure - Normal operating temperature and pressure.

B. Description of Event:

This event involves the discovery, on August 30, 2000, of an error contained in a surveillance procedure on the Main Control Room Ventilation System [VI] (VC) performed on June 15, 2000. This system is common to both Byron Station Unit 1 and Unit 2. No other systems or components were inoperable at the time of this event that contributed to this event.

On June 14, 2000, at 1720 hours a scheduled Technical Specifications surveillance procedure, "Control Room Ventilation System Train 0B Monthly Surveillance" (OBOSR 7.10.1-2) was authorized to begin by a licensed Senior Reactor Operator (SRO). The surveillance procedure satisfies Surveillance Requirement (SR) 3.7.10.1 for Technical Specification 3.7.10, "Control Room Ventilation (VC) Filtration System." The SR requires each VC Filtration system train to operate every 31 days with flow through the makeup system filters for greater than or equal to 10 continuous hours with heaters operating and with flow through the recirculation charcoal adsorbers for greater than or equal to 15 minutes.

At 1725 hours, the OA VC train was secured and the OB VC train was placed into service in the normal non-emergency mode in preparation for the performance of the upcoming scheduled surveillance procedure. The procedure was then initiated at 0005 hours on June 15, 2000, by a licensed Nuclear Station Operator (NSO).

The initial part of the procedure starts the VC Makeup Filter Unit Fan (0VC03CB) and heaters and aligns the appropriate dampers. The start time was documented in the procedure and the NSO log as 0131 hours on June 15, 2000. At this step of the procedure, the NSO must wait at least 10 hours before performing the next step.

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B. Description of Event (continued):

Operations shift turnover took place at 0700 hours on June 15, 2000, and the in-progress procedure was turned over to the oncoming shift NSO. No specific mention was made in the turnover of the time when the 10-hour criteria would be satisfied. The clock time documented in the procedure, for completing the 10 continuous hours requirement, was 1041 hours on June 15, 2000. The surveillance directs the NSO to calculate total run time by subtracting the start and finish times to ensure the 10 continuous hours requirement is satisfied. The NSO erroneously documented "10 hours, 10 minutes" when subtracting 0131 hours from 1041 hours, when it should have been 9 hours, 10 minutes. No verification of this calculation is required in the procedure.

With this undetected error, the NSO continued performance of the procedure and ultimately completed the procedure at 1238 hours on June 15, 2000. One of the final steps of the procedure is to shut down 0VC03CB, however, the procedure does not require the NSO to record the time. The NSO also did not note the time in his log. A programmatically required management review of the surveillance procedure failed to find the error and the procedure was approved at 1239 hours on June 15, 2000.

The error went undetected until August 30, 2000, when the Operations Department Surveillance Coordinator was performing an independent review of the surveillance procedure. A prompt investigation was initiated. It was considered a possibility that the recorded 1041 hours was mistakenly recorded and the NSO meant to record 1141 hours. However, subsequent times recorded in the procedure were prior to 1141 hours. Other means to objectively ascertain the exact stop time of 0VC03CB on June 15, 2000 were unsuccessful.

The SR was verified to be properly satisfied on May 16, 2000, and July 14, 2000. The Technical Specification requirement is to verify this SR every 31 days, including the 25% allowance of Technical Specification SR 3.0.2. This Technical Specifications surveillance was exceeded after the May 16, 2000 SR performance and is a condition prohibited by Technical Specification. This event is reportable to the NRC in accordance with 10 CFR 50.73(a)(2)(i)(B).

C. Cause of Event:

The first root cause of this event is a human performance error of the NSO performing the surveillance procedure. When questioning the NSO involved, he indicated that he could not recall any precursors to his error, such as high workload, time pressure, and multiple tasks. The format of the procedure was reviewed for human factor weaknesses. Though human factor improvements could be made, we have concluded the procedure format did not contribute to this event.

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C. Cause of Event (continued):

A second root cause was determined to be a failure of Operations management to establish clear expectations for conducting supervisory review of surveillance procedures.

Three contributing causes to the error were identified:

- 1) poor self-checking by the NSO,
- 2) an incomplete turnover of information between the offgoing and oncoming NSOs, and
- 3) failure of the Operations Department Surveillance Coordinator to elevate to management's attention via the Corrective Actions Program (CAP) the minor surveillance procedures errors previously found during his review of completed procedures. Operations management believes the issue of unclear expectations for supervisory reviews would have been uncovered much sooner by CAP trending activities had all the minor errors been documented in the Corrective Actions Program.

D. Safety Analysis:

The affect of this event on the public and the plant was minimal. The 0VC03CB fan was operated for at least 9 hours, 10 minutes and most probably was operated for greater than 10 continuous hours. Failing to demonstrate a SR does not in and of itself affect operability of the equipment involved. The VC train SR was demonstrated to be properly satisfied before (i.e., on May 16, 2000) and after (i.e., on July 14, 2000) the June 15, 2000, performance of the SR.

E. Corrective Actions:

The NSO involved has been counseled in accordance with company procedure.

Operations Management will develop clear expectations for the supervisory review of completed surveillances procedures. This guidance will be summarized and placed under the supervisor review signature on the surveillance coversheet. These expectations will be placed in the appropriate governing procedures.

Operations Management will develop improved guidance for shift turnover information. This guidance will include documentation of the specific clock times the oncoming operator needs to be aware of regarding in-progress surveillance procedures.

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E. Corrective Actions (continued):

The Operations Department Surveillance Coordinator will document errors found during review of completed surveillance procedures in the Corrective Actions Program.

Other Station Departments that perform surveillance procedures will communicate the lessons learned from this event to their personnel including expectations for a proper supervisory review.

F. Previous Occurrences:

None

G. Component Failure Data:

None