

Commonwealth Edison Company
Byron Generating Station
4450 North German Church Road
Byron, IL 61010-9794
Tel 815-234-5441



March 03, 2000

LTR: BYRON 2000-0024
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) 2000-001-00

Enclosed is an LER concerning the discovery of several valves not properly included within the scope of the inservice testing program. These valve omissions were discovered during a self-initiated reconstitution of the inservice testing program. 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 Mr. Brad Adams, Regulatory Assurance Manager, at (815) 234-5441, extension 2280.

Sincerely,

A handwritten signature in black ink, appearing to read "W Levis".

William Levis
Site Vice President
Byron Station

WL/JL/dpk

Enclosure: Byron Station Unit 1 LER 2000-01-00

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

NRC FORM 366 (4-95)			U.S. NUCLEAR REGULATORY COMMISSION				APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98							
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, Unit 1						DOCKET NUMBER (2) STN 05000454			PAGE (3) 1 of 7					
TITLE (4) Inservice Testing Not Performed on Several Valves Due to Inadequate Program Scope Development														
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				
02	02	2000	2000	001	00	03	03	2000	Byron, Unit 2	STN 05000455				
									FACILITY NAME	DOCKET NUMBER				
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								TELEPHONE NUMBER (Include Area Code)						
Brad Adams, Regulatory Assurance Manager								(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)								EXPECTED SUBMISSION DATE (15)						
YES (If yes, complete EXPECTED SUBMISSION DATE)				X	NO			MONTH	DAY	YEAR				

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

As part of an effort to enhance the quality of the Inservice Testing (IST) Program, Commonwealth Edison (ComEd) Company conducted a design basis review of components in the IST programs at the five ComEd sites, including Byron Station. The purpose of the review was to re-evaluate the ComEd IST Programs based on current guidance and determine and document components that should or should not be in the scope of the IST Program. This review began at Byron Station in May of 1999, with a final draft report being provided in December of 1999. The subsequent acceptance review of components proposed for inclusion in the IST Program was completed on February 2, 2000. This review indicated that several valves needed to be added to Byron Station IST Program and that acceptable surveillance tests on several of these additional valves could not be verified.

Previous scoping efforts were ineffective in properly applying ASME code requirements to plant components. At the time of the previous scoping efforts there were insufficient controls in place to ensure the IST engineer had the proper knowledge to make all the scoping decisions. The safety significance of this issue is minimal. All missed testing requirements were performed with acceptable results. This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), for an action or condition prohibited by Technical Specifications.

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Byron, Unit 1	STN 05000454	2000 - 001 - 00			2 of 7

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

A. Plant Conditions Prior to Event:

Event Date/Time: February 2, 2000/1017 hours

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

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

Reactor Coolant System [AB] Temperature/Pressure: Both units were at normal operating temperature and normal operating pressure.

B. Description of Event:

Byron Station is required by 10 CFR 50.55a(f) to perform inservice testing (IST) per the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for Class 1,2, and 3 pumps and valves. A testing plan is developed and organized into ten-year intervals. The first interval for Unit 1 and Unit 2 began with their commercial service dates, September 16, 1985 and August 21, 1987, respectively. For efficiency purposes, the second interval IST plan for Unit 1 and Unit 2 were combined and started on July 1, 1996. The second interval plan was developed in accordance with the 1989 edition of the ASME Code. This edition of the ASME Code added a new test requirement for an indication test for passive valves.

In the early 1998 timeframe, the Commonwealth Edison (ComEd) Company Nuclear Generation Group (NGG) Corporate Engineering Department, through a self-assessment effort, concluded that the Inservice Testing (IST) programs at the five operating NGG sites needed improvement. One of the improvement efforts for the IST programs included a comprehensive review of the components included in the current programs to ensure a clear well-documented basis existed for inclusion or exclusion of components in the scope of the IST program. It was recognized at the time, that with a more formal and rigorous approach to scoping, some discrepancies were likely to be uncovered.

The five-site project was contracted to an external engineering firm (i.e., Duke Engineering Services). The project began on February 1999. Byron and Braidwood Stations' portion of the project began in May of 1999 following completion of the Quad Cities Station project.

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Byron, Unit 1	STN 05000454	2000 - 001 - 00			3 of 7

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

B. Description of Event, cont.:

The engineering team, which conducted the Byron and Braidwood Stations review, consisted of two IST ASME Code experts, support engineering personnel, and a Senior Reactor Operator previously licensed at Braidwood Station. The team interfaced with appropriate NGG and Station engineering personnel during the course of this project and provided a final draft of the IST Scope bases documents in December of 1999. Though not yet formally endorsed and accepted by NGG or Site Management, this draft scoping document included recommendations to remove and add valves to the scope of the IST program. On December 10, 1999, in anticipation of possible approval of the valve additions, Byron engineering, as a prudent measure, ensured that the appropriate IST tests for the added valves were developed and performed.

On February 2, 2000, after completing the review of the scoping document, NGG and Byron Station Engineering concluded the recommended valve additions to the IST program were valid and should have been subject to the required inservice testing requirements in accordance with the ASME code. In addition, subsequent to the initiation of the re-scoping effort, other potential scoping errors were identified outside of this engineering review (see Section F, Previous Occurrences). For some of the valve additions, we were able to demonstrate that other testing activities satisfied the required inservice test, consequently, demonstrating compliance to the ASME code. However, at Byron Station several valves remained for which we could not acceptably demonstrate the ASME Code requirements were satisfied. Table 1 contains these remaining valve additions.

The most recent Technical Specification revision prior to the recently implemented Improved Technical Specifications in February 1999, contained Surveillance Requirement 4.0.5.a, which states, in part, that inservice testing shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. Consequently, while under previous revisions of the Technical Specification, failing to perform inservice testing on the valves listed in Table 1 constituted a condition prohibited by Technical Specification and therefore was reportable to the NRC in accordance with 10 CFR 50.73(a)(2)(i)(B).

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Byron, Unit 1	STN 05000454	2000	- 001	- 00	4 of 7

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

B. Description of Event, cont.:

Table 1
Missed Surveillance on IST Valves

Nomenclature	Valve Name and Type	Test/Frequency	Applicable IST Interval
CC070A/B	Unit 1 & 2, Train A & B Component Cooling (CC) Surge Tank Demineralizer Makeup Check Valve.	Closure/Refuel	1st and 2nd
CS010A/B	Unit 1 & 2, Train A & B Containment Spray (CS) [BE] Eductor Inlet Isolation Air Operated Valve	Passive Position Indication/2 years	2nd
OWO205A/B	Unit Common Train A & B Demineralized Water Makeup to Main Control Room Chilled Water Check Valve	Closure/Refuel	1st and 2nd
SX168	Unit 1 & 2 Auxiliary Feedwater [BA] Pump Cubicle Cooler Essential Service Water (SX) [BI] Temperature Control Air Operated Valve	Fail Open/Refuel	1st and 2nd
OSX157A/B	Unit Common Train A & B SX Train Makeup Discharge Isolation Motor Operated Valve	Passive Position Indication/2 years	2nd
SX011	Unit 1 & 2 SX Train Cross Tie Isolation Motor Operated Valve	Passive Position Indication/2 years	2nd
SX033	Unit 1 & 2 SX Train B Cross Tie Isolation Motor Operated Valve	Passive Position Indication/2 years	2nd
SX034	Unit 1 & 2 SX Train A Cross Tie Isolation Motor Operated Valve	Passive Position Indication/2 years	2nd
SX136	Unit 1 & 2 SX Train B Return Header Isolation Valve	Passive Position Indication/2 years	2nd
SX004	Unit 1 & 2 CC Heat Exchanger SX Supply Isolation Motor Operated Valve	Passive Position Indicator/2 years	2nd
SX010	Unit 1 & 2 SX Cooling Tower Basin Return Header Isolation Motor Operated Valve	Passive Position Indicator /2 years	2nd

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		
FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6)		PAGE (3)
Byron, Unit 1		STN 05000454		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
				2000 - 001 - 00		5 of 7

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

C. Cause of Event:

Previous scoping efforts were ineffective in properly applying ASME code requirements to plant components. At the time of the previous scoping, there were insufficient controls in place to ensure the IST engineer had the proper knowledge to make the full spectrum of necessary scoping decisions. A process did not exist such that a misunderstood or misapplied code requirement would systematically be recognized and remedied.

D. Safety Analysis:

This event had minimal effect on public and plant safety. All the missed testing requirements were subsequently performed with acceptable results. Periodic surveillance testing of components is required to demonstrate the component is capable of satisfying its intended function. Failing to perform these surveillances does not in and of itself render the components incapable of performing their function. In addition, other surveillances or operational activities, such as system line-up procedures, exist that could have detected component failures. However, it is possible that an undetected component failure or degradation could have occurred and affected the safety function described in Table 2.

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

FACILITY NAME (1)		DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Byron, Unit 1		STN 05000454	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	6 of 7
			2000 - 001 - 00			

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

D. Safety Analysis, cont.:

Table 2 - Safety Function
(All valves listed apply to both Units)

Nomenclature	Safety Function
CC070A/B	These valves must close to prevent backflow of the CC surge tanks to the demineralizer water system [KC]
CS010A/B	These valves must remain open to provide a flow path to the eductor for the CS pump discharge.
OWO205A/B	These valves must close to prevent backflow of main control room chilled water system to the demineralized water system
SX168	These valves must open to provide a flow path for SX to the AF pump room cubicle cooler.
OSX157A/B	These valves must open to provide a flow path for SX makeup water to the cooling tower basin.
OSX158A/B	These valves must open to provide a flow path for SX makeup water to the cooling tower basin.
SX011	These valves must open to provide a return flow path to cross tie the SX return header.
SX033	These valves must open to cross tie the SX pump discharge header.
SX034	These valves must open to cross tie the SX pump discharge header.
SX136	These valves must open to cross tie the SX return headers.
SX004	These valves must open to provide a flow path to the CC Heat Exchanger.
SX010	These valves must open to provide a return flow path from the SX cooling tower basin.

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Byron, Unit 1	STN 05000454	2000 - 001 - 00			7 of 7

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

E. Corrective Actions:

All required tests in Table 1 were performed with acceptable results.

All the Table 1 valves are being formally added to the IST program and appropriate controls put in place to ensure IST requirements for these valves continue to be met.

A detailed NGG Engineering procedure, applicable to all operating NGG sites, has been developed and is currently in the process of being implemented. This procedure, ER-AA-321, "Administrative Requirements for Inservice Testing," provides a common process for IST scope control.

IST program engineers now must be certified prior to being allowed to perform IST program functions such as making scoping decisions. This certification guide requires demonstrating knowledge of IST issues.

F. Previous Occurrences:

1. Problem Identification Form (PIF) B1998-0512. This PIF documents the 1/2AF004A/B valves as not being properly included in the scope of the IST program. The valves were added to the program. The corrective actions to prevent recurrence took credit for the upcoming five site Duke engineering rescoping effort.
2. PIF B1998-05242. This PIF documents valves 1/2SI8923A/B not being properly included in scope of IST program for a passive indication test. The valves were added to the program. Corrective actions took credit for the upcoming Duke Engineering re-scoping effort.
3. PIF B1999-00864. This PIF documents 1/2SX004 and 1/2SX010 not being properly included in the scope of the IST program. The valves were added to the program. Corrective actions took credit for the upcoming Duke Engineering re-scoping effort.