

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Indian Point Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 2 8 6										PAGE (3) 1 OF 0 4																				
TITLE (4) Voluntary LER Detailing Possible ASCO SOV Lubricant Concerns Per ASCO Service Bulletin And Plant Inspections Of Affected SOVS																																								
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)																					
1	0	2	5	8	8	8	8	—	0	0	9	—	0	0	1	2	2	3	8	8											0 5 0 0 0									
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OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																																					
N			20.402(b)						20.405(c)						50.73(a)(2)(iv)						73.71(b)																			
POWER LEVEL (10)			20.405(a)(1)(i)						50.36(c)(1)						50.73(a)(2)(v)						73.71(c)																			
0 0 0			20.405(a)(1)(iii)						50.36(c)(2)						50.73(a)(2)(vii)						X OTHER (Specify in Abstract below and in Text, NRC Form 366A)																			
			20.405(a)(1)(iii)						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 Roger Lauricella, Plant Engineer I																				TELEPHONE NUMBER																				
																				AREA CODE 9 1 4 7 3 6 - 8 0 4 8																				
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	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS											
SUPPLEMENTAL REPORT EXPECTED (14)																				EXPECTED SUBMISSION DATE (15)																				
YES (If yes, complete EXPECTED SUBMISSION DATE)																				MONTH DAY YEAR																				
X NO																																								

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

This LER is a voluntary submittal detailing possible generic ASCO SOV concerns developed in response to a recent ASCO Service Bulletin. On October 25, 1988 with the plant in a cold shutdown for a steam generator maintenance outage, a letter was received by plant personnel from the Automatic Switch Company (ASCO) indicating a potential problem existed with ASCO NP8314 series solenoid valves (SOVs) failing to shift to a de-energized position following extended periods of energization. ASCO identified the failure mechanism as the solidification of a lubricant used in the initial manufacturing processes that had migrated into critical surfaces of the valve's subassembly and which subsequently caused the SOVs to fail to shift when called upon. The plant identified six normally energized NP8314 series SOVs in use. Two of the normally energized NP8314 series SOVs were replaced with improved series NP8314 SOVs from ASCO. The two that were removed were disassembled and tested with no lubricant solidification problems noted. The remaining energized NP8314 series SOVs are to be replaced in accordance with the ASCO Recommendations during the 1989 Refueling Outage.

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PDR ADOCK 05000286
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11/1/23

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/88

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 366A's) (17)

DESCRIPTION OF THE EVENT

On October 25, 1988 with the plant in a cold shutdown condition a letter was received from the Automatic Switch Company (ASCO) (A609) indicating that a potential problem may exist with ASCO NP8314 series solenoid operated valves (SOVs) (FSV). The ASCO letter specifically stated that the potential problem existed when the NP8314 series SOVs were de-energized following extended periods of energization. ASCO indicated that all end users should evaluate the use of the effected series SOVs and that ASCO would supply rebuild kits or replacement SOVs as required. Plant Technical Services Personnel conducted an investigation into this concern and devised corrective actions necessary to resolve this NP8314 series SOV deficiency.

INVESTIGATION OF THE EVENT

Plant Technical Services Personnel reviewed all effected NP8314 series ASCO SOVs in use at Indian Point 3 and located six that were all normally energized and potentially affected by the ASCO concern. The six SOVs found were:

Equipment IDDescription

SP-SOV-956E	SAMPLE ISOLATION VALVE (SYSTEM: AB)
SP-SOV-956F	SAMPLE ISOLATION VALVE (SYSTEM: AB)
WD-SOV-1723	SUMP PUMP DISCHARGE VALVE (SYSTEM: WD)
WD-SOV-1728	SUMP PUMP DISCHARGE VALVE (SYSTEM: WD)
WD-SOV-1786	DRAIN TANK VENT VALVE (SYSTEM: WD)
WD-SOV-1787	DRAIN TANK VENT VALVE (SYSTEM: WD)

CAUSE OF THE EVENT

Discussions with ASCO revealed the following information:

- 1) The identified NP8314 series SOV deficiency was first reported at the Kewaunee site on May 5, 1988 (LER 305-88007).
- 2) The ASCO investigation, and a recently completed chemical analysis conducted by an independent laboratory, indicated a high probability that the cause of the failures at Kewaunee was a lubricant used in the manufacture of a sub-assembly of the failed valves. Although the sub-assembly was routinely cleaned following the use of the lubricant, ASCO found that the lubricant trapped within an internal cavity of the sub-assembly, may not be fully removed. The lubricant could later migrate to a critical surface of the

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

sub-assembly and solidify following long term energization. Once solidified, the lubricant could cause portions of the sub-assembly to stick, thereby resulting in failure of the ASCO NP8314 series valves to shift to the de-energized position.

- 3) ASCO stated that only the NP8314 series SOVs (Suffix "V" or "E") were prone to this problem.
- 4) ASCO recommended replacement of affected SOVs if they were installed in an environment where the ambient temperature was near the upper temperature limit of the valve. A statement was also made that should any normally deenergized SOVs be changed to normally energized, replacement of those SOVs was also recommended.

CORRECTIVE ACTIONS

The following actions were undertaken as a result of this incident:

- 1) All six normally energized NP8314 series SOVs of possible concern were tested per existing surveillance procedures for operability and integrity and shown operable on October 29, 1988.
- 2) Six replacement SOVs were ordered from ASCO. The SOVs arrived on site and passed thru Quality Control inspection on November 1, 1988.
- 3) Two replacement SOVs were installed by site maintenance personnel for valves SP-SOV-956E and SP-SOV-956F.
- 4) The two replaced SOVs were disassembled and tested. No lubricant solidification problems were noted.
- 5) The remaining four energized NP8314 series SOVs will be replaced during the 1989 Refueling Outage in accordance with the ASCO recommendation.

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APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

ANALYSIS OF THE EVENT

This event is being reported as a voluntary LER. The six energized SOVs of concern were proven operable upon the ASCO notification. Two SOVs were changed out in order to conduct further testing. No evidence of lubricant solidification was found. It was determined that all effected SOVs would have been able to perform their intended functions if required to do so. No other safety concerns exist as a result of this event.

SECURING FROM THE EVENT

The ASCO solenoids were evaluated and demonstrated to be operable by the plant staff. The steam generator maintenance outage was completed, the plant brought critical and synchronized to the bus at 1923 hours on November 22, 1988. No similar events or LERs have occurred or been reported to date at Indian Point, Unit 3.

Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 739.8200



December 23, 1988
IP3-88-075
IP3-88-009

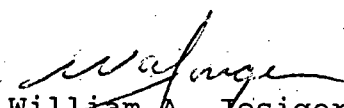
Docket No. 50-286
License No. DPR-64

Document Control Desk
Main Station PI-137
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

The attached Licensee Event Report LER 88-009-00 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in the requirements for "other" per 10CFR50.73 and is submitted as a Voluntary LER.

Very truly yours,


William A. Josiger
Resident Manager
Indian Point Three Nuclear Power Plant

ED/rj
Attachment

cc: Mr. William Russell
Regional Administrator
Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

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