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April 16, 1999

Re: Indian Point Unit No. 2  
Docket No. 50-247  
LER 99-05-00

Document Control Desk  
US Nuclear Regulatory Commission  
Mail Station PI-137  
Washington, DC 20555

The attached Licensee Event Report 99-05 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

*A. Alan Blinda*

Attachment

cc: Mr. Hubert J. Miller  
Regional Administrator - Region I  
US Nuclear Regulatory Commission  
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King of Prussia, PA 19406

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US Nuclear Regulatory Commission  
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PDR ADDCK 05000247  
S PDR

**LICENSEE EVENT REPORT (LER)**(See reverse for required number of  
digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

**FACILITY NAME (1)**

Indian Point Unit No. 2

**DOCKET NUMBER (2)**

50-247

**PAGE (3)**

1 OF 4

**TITLE (4)**

Failure to Declare Automatic Containment Isolation Valve Inoperable

| EVENT DATE (5)        |     |      | LER NUMBER (6)  |                          |                    | REPORT DATE (7) |                   |      | OTHER FACILITIES INVOLVED (8)                    |                        |
|-----------------------|-----|------|---|--------------------------|--------------------|-----------------|-------------------|------|--|------------------------|
| MONTH                 | DAY | YEAR | YEAR  | SEQUENTIA<br>L<br>NUMBER | REVISION<br>NUMBER | MONTH           | DAY               | YEAR | FACILITY NAME                                    | DOCKET NUMBER          |
| 3                     | 17  | 99   | 99  | -- 0<br>5 --             | 00                 | 4               | 16                | 99   | FACILITY NAME                                    | DOCKET NUMBER<br>05000 |
| OPERATING<br>MODE (9) |     | N    | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11) |                          |                    |                 |                   |      |  |                        |
| POWER<br>LEVEL (10)   |     | 99   | 20.2201(b)  |                          | 20.2203(a)(2)(v)   |                 | 50.73(a)(2)(i)    |      | 50.73(a)(2)(viii)                                |                        |
|                       |     |      | 20.2203(a)(1)   |                          | 20.2203(a)(3)(i)   |                 | X 50.73(a)(2)(ii) |      | 50.73(a)(2)(x)                                   |                        |
|                       |     |      | 20.2203(a)(2)(i)  |                          | 20.2203(a)(3)(ii)  |                 | 50.73(a)(2)(iii)  |      | 73.71  |                        |
|                       |     |      | 20.2203(a)(2)(ii)   |                          | 20.2203(a)(4)      |                 | 50.73(a)(2)(iv)   |      | OTHER  |                        |
|                       |     |      | 20.2203(a)(2)(iii)  |                          | 50.36(c)(1)        |                 | 50.73(a)(2)(v)    |      | Specify in Abstract below or<br>in NRC Form 366A |                        |
|                       |     |      | 20.2203(a)(2)(iv)   |                          | 50.36(c)(2)        |                 | 50.73(a)(2)(vii)  |      |  |                        |

**LICENSEE CONTACT FOR THIS LER (12)****NAME**

Philip Griffith, Sr. Licensing Engineer

**TELEPHONE NUMBER (Include Area Code)**

(914)734-5190

**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE<br>TO EPIX | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE<br>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 15 single-spaced typewritten lines) (16)**

On March 17, 1999, with the unit operating at 99% power, the switches for Solenoid Operated Valves (SOV) EW-1 and EW-2, "WCP Air Supply To Cont. Isolation Valves," in the Weld Channel (WCCPPS) for the Post Accident Containment Ventilation System were found in the closed position contrary to the requirements of Check Off List 10.9.1, Post Accident Hydrogen Removal System. Valves EW-1 and EW-2 are maintained open to pressurize Weld Channel Zone 4 to 47 PSI. At 1150 A.M., upon discovery of the mispositioning of EW-1 and EW-2 switches, the seven day action statement was entered per Technical Specification 3.3.D.1.a for a portion of Zone 4 WCCPPS being inoperable.

On March 17, 1999, at 1235 P.M. the switches for EW-1 and EW-2 were placed in the open position and Technical Specification 3.3.D.1.a action statement was exited. The design basis of the system is to prevent containment out-leakage, during a design basis Loss of Coolant Accident, by maintaining a higher external pressure on the liner welds and penetrations than containment pressure. This system is not required to meet the 10 CFR 100 offsite dose limits. Public health and safety were not affected by this event.

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|                         |            | 99             | -- 0<br>5                | -- 00              |          |

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

**PLANT AND SYSTEM IDENTIFICATION:**

Westinghouse 4-Loop Pressurized Water Reactor

**IDENTIFICATION OF OCCURRENCE:**

Weld Channel Solenoid Valve Switches mispositioned

**EVENT DATE:**

March 17, 1999

**REPORT DUE DATE:**

April 16, 1999

**REFERENCES:**

Indian Point 2 Condition Reporting System (CRS) No. 199902207

**PAST SIMILAR OCCURRENCES:**

LER 82-008/03L Three Lines in Zone 2 Weld Channel Isolated, CRS No. 199700963 22 Hydrogen Recombiner, CRS No. 199801925 Residual Heat Removal Pump Heat Exchanger Stops, SAO-132 Report 98-07, Tagout issues

**DESCRIPTION OF OCCURRENCE:**

On March 17, 1999, with the unit operating at 99% power, an operator in license training reported that the switches for solenoid operated valves (SOV) EW-1 and EW-2, "WCP Air Supply To Cont. Isolation Valves," in the Weld Channel were out of position. This condition was noted while performing a Job Performance Measure (JPM) as required for operator license training. These valves supply Weld Channel (WCCPPS) air to the Post Accident Containment Ventilation System (PACVS) and are required to be open. As of 1150 A.M., a seven day action statement per Technical Specification (TS) 3.3.D.1.a was entered for an inoperable section of zone 4 of the WCCPPS. At 1235 P.M., the switches for SOVs EW-1 and EW-2 were placed in the open position, the valve positions verified open and TS 3.3.D.1.a action statement exited.

On March 17, 1999 at 1250 P.M., as a result of not meeting the design basis for the weld channel, a one-hour non-emergency notification per 10 CFR 50.72(b)(1)(ii)(B) and the requirements of station procedure SAO-124 item 7, Station Administrative Order "Oral Reporting of Non-Emergency Events and Items of Interest and Significant Occurrence Reporting" was made.

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

**ANALYSIS OF OCCURRENCE:**

The sequence of events associated with this event are as follows:

|                                      |  |
|--------------------------------------|--|
| January 1998                         | - EW-1 and EW-2 last worked on   |
| January 6, 1999                      | - performance test PT-Q13, Inservice Valve Test for both EW-1 and EW-2 was performed and subsequently an Independent Verification of valve position was performed  |
| March 17, 1999 1150 A.M.             | - switches for SOV EW-1 and EW-2 found mispositioned by trainee during performance of JPM, reported to watch supervision, entered 7 day action statement per TS 3.3.D.2.a  |
| March 17, 1999 1235 P.M.             | - switches for SOV EW-1 and EW-2 were repositioned to the open position, the Weld Channel was reestablished as operable and the TS 3.3.D.1.a action statement was exited   |
| March 17, 1999 1250 P.M.             | - determination made that this event placed the plant outside the design basis for the WCCPPS per Updated Final Safety Analysis Report, section 6.6.1, Containment Penetration and Weld Channel Pressurization System; one hour non-emergency notification was made per the requirements of 10 CFR 50.72(b)(1)(ii)(B) and the requirements of station procedure SAO-124 item 7, Station Administrative Order "Oral Reporting of Non-Emergency Events and Items of Interest and Significant Occurrence Reporting" |
| March 17, 1999 and<br>March 18, 1999 | - all accessible WCCPPS valves checked to verify proper alignment  |

The design basis for the Weld Channel states that the system provides a means for continuously pressurizing the positive pressure zones incorporated into the containment penetrations, with SOVs EW-1 and EW-2 closed the requirements of the design basis could not be met. The WCCPPS is designed to provide a means for the determination of containment leaktightness during power operation, it is designed as an Engineered Safety Feature and provides assurance that the containment leak rate is lower than assumed in the accident analysis, but there is no credit taken for system operation in the calculation of the offsite accident dose. The public health and safety was not affected as a result of this valve mispositioning.

**ROOT CAUSE SUMMARY:**

During the review of this event the specific time and cause of the mispositioning of the SOV EW-1 and EW-2 switches could not be determined. A review of all known operations associated with the SOV EW-1 and EW-2 switches between January 1988 and March 17, 1999 was performed:

Although a specific root cause could not be determined, an apparent cause of this event appears to be weakness in the procedural guidance associated with the plant configuration control system. The operations department Standards and Expectations for Operations Personnel, Revision 1, December 29, 1998, section 3.13, Procedure Adherence and Use, states sign-offs will be signed off prior to proceeding to the next step... These sign-offs are to be made as each step is completed, not at the completion of the test or procedure. During discussions with the Nuclear Plant Operators (NPO) that performed the January 6, 1999 PT-Q13 valve restoration they indicated that the independent verification was signed off after all valves had been aligned to prevent making numerous trips to the valve room. The NPO that performed the independent verification step did not accompany the NPO who performed the initial verification. However, the NPO who performed the initial verification was in the same room at the time the independent verification was performed. This potential loss of independence does represent a potential weakness in the independent verification process.

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**TEXT** (If more space is required, use additional copies of NRC Form 366A) (17)**ROOT CAUSE SUMMARY(cont):**

The lack of some human factor considerations may have contributed to this mispositioning event. The indication lights for EW-1 and EW-2 do not work. The station event analysis report stated that the lights were a possible contributor and "lights that operated correctly would better cue the operator of incorrect valve position." The test procedure PT-Q13, Inservice Valve Test has the sign-offs for the independent verifier located on the same sheet as the initial verifier, it does not follow the same philosophy as the Operations Administrative Direction (OAD) procedure for independent verification. The station event analysis report stated that; consistent application of the guidance indicated in the OAD for independent verification "would help clarify verification expectations."

Previous corrective actions, for maintaining configuration control, have not been fully effective, and may have contributed to the Weld Channel EW-1 and EW-2 valve mispositioning. From a 1998 root cause analysis report SAO-132 98-07, Tagout Issues seven corrective actions associated with mispositioning events associated with tagouts were completed, however, the Switches for SOVs EW-1 and EW-2 were subsequently mispositioned.

**CORRECTIVE ACTIONS:**

1. A vertical sampling of WCCPPS valve positions was conducted resulting in the verification of the correct alignment of all accessible valves.
2. A horizontal sampling of the valves addressed in PT-Q13, Inservice Valve Test, stroked on January 6, 1999 were verified to be properly aligned.
3. All valves and breakers in the same room with SOV EW-1 and EW-2 were verified properly aligned.
4. Security review was performed to verify that tampering was not an issue in this mispositioning event.
5. An evaluation to determine if repair or modification of the position indicating light circuits for EW-1 and EW-2 is scheduled for completion by July 30, 1999.
6. Operations procedures are scheduled to be revised to ensure consistency with the "Standards and Expectations for Operations Personnel" by August 31, 1999.
7. The philosophy for independent verification directed in the Operations OAD for independent verification is scheduled to be incorporated into performance test PT-Q13, Inservice Valve Test, by June 30, 1999.
8. The operations management is scheduled to re-emphasize the standards and expectations for independent verifications with all watch sections by July 30, 1999.
9. Operations training is scheduled to retrain all watch sections on the updated independent verification techniques by August 31, 1999.