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September 24, 1990

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 90-07-00

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

The attached Licensee Event Report LER 90-07-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

Michael L. Miele

Attachment

cc: Mr. Thomas T. Martin
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Donald S. Brinkman, Senior Project Manager
Project Directorate I-1
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US Nuclear Regulatory Commission
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Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

| | | |
|----------------------------------------------|--------------------------------------|----------------------|
| FACILITY NAME (1) Indian Point Unit No. 2 | DOCKET NUMBER (2) 0 5 0 0 0 2 4 7 | PAGE (3) 1 OF 0 3 |
|----------------------------------------------|--------------------------------------|----------------------|

TITLE (4)
Toxic Gas Monitor / ESF Actuation

| 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) |
| 0 | 8 | 25 | 90 | 007 | 00 | 0 | 9 | 24 | | | 0 5 0 0 0 |
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|------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|--|--|--|--|--|--|
| OPERATING MODE (8) N | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11) | | | | | | | | | |
| POWER LEVEL (10) 99.6 | <input type="checkbox"/> 20.402(b) | <input type="checkbox"/> 20.405(c) | <input checked="" type="checkbox"/> 50.73(a)(2)(iv) | <input type="checkbox"/> 73.71(b) | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(i) | <input type="checkbox"/> 50.36(c)(1) | <input type="checkbox"/> 50.73(a)(2)(v) | <input type="checkbox"/> 73.71(c) | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(iii) | <input type="checkbox"/> 50.36(c)(2) | <input type="checkbox"/> 50.73(a)(2)(viii) | OTHER (Specify in Abstract below and in Text, NRC Form 366A) | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(iii) | <input type="checkbox"/> 50.73(a)(2)(i) | <input type="checkbox"/> 50.73(a)(2)(viii)(A) | | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(iv) | <input type="checkbox"/> 50.73(a)(2)(ii) | <input type="checkbox"/> 50.73(a)(2)(viii)(B) | | | | | | | |
| <input type="checkbox"/> 20.405(a)(1)(v) | <input type="checkbox"/> 50.73(a)(2)(iii) | <input type="checkbox"/> 50.73(a)(2)(x) | | | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)

| | |
|---------------------------------|-------------------------------------------|
| NAME Richard Louie, Engineer | TELEPHONE NUMBER 9 1 4 5 2 6 - 5 6 7 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 |
|-------|--------|-----------|--------------|---------------------|-------|--------|-----------|--------------|---------------------|
| X | V I | M O N | W 2 4 0 | N | | | | | |
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SUPPLEMENTAL REPORT EXPECTED (14)

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|--------------------------------------------------------------------------|----------------------------------------|-------------------------------|-------|-----|------|
| <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) | <input checked="" type="checkbox"/> NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On August 25, 1990, at about 2335 hours, with reactor power at 96.5%, the Hydrogen Cyanide (HCN) toxic gas monitor channel 2 alarmed, resulting in the transfer of the Central Control Room (CCR) Ventilation System from the normal mode to the incident mode. Related actuations of the HCN toxic gas monitor channels occurred subsequently within the period of August 27-29.

As designed, the detection of HCN by either Channels 1 or 2 of the toxic gas monitors will generate an alarm in the CCR and isolate the CCR Ventilation System. The Toxic Gas Monitoring System is classified as an Engineered Safety Feature (ESF). No Technical Specification or NRC limits were exceeded.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

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| FACILITY NAME (1) Indian Point Unit No. 2 | DOCKET NUMBER (2) 0 5 0 0 0 2 4 7 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor

IDENTIFICATION OF OCCURRENCE:

Inadvertent actuation of the HCN toxic gas monitoring channels, initiating operation of an Engineered Safety Feature (ESF).

EVENT DATE:

August 25-29, 1990

REPORT DUE DATE:

September 24, 1990

REFERENCES:

Significant Event Report (SOR) 90-408, -410, -413, -414, -417, -418 and -425

PAST SIMILAR OCCURRENCE:

None

DESCRIPTION OF OCCURRENCE:

On August 25, 1990, at about 2335 hours, with reactor power at 96.5%, the CCR Ventilation System was automatically aligned from the normal mode to the incident mode and an ESF was actuated. The cause of ESF actuation was due to an alarm generated by the HCN toxic gas monitor system.

Immediate investigation determined that the cause of the inadvertent actuations of the HCN toxic gas monitor channels 1 and 2 in all occurrences was due to either tears or rips of the paper tape which senses the respective gas being monitored. Rips or tears in the paper tape causes a fiber optic monitor in the toxic gas monitor to generate a false alarm. In all cases, the paper was either repaired (advanced) or replaced, the alarm was reset and the ventilation system returned to normal mode.

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

ANALYSIS OF OCCURRENCE:

This report is being made since actuation of an ESF occurred. Any manual or automatic actuation of an ESF is reportable under 50.73(a)(2)(IV). There were no safety implications; all safety systems performed in accordance with design.

CAUSE OF OCCURRENCE:

The HCN toxic gas monitor has inlet and outlet air sample pumps which draw air across a moving tape. When HCN is detected, the tape will change color. The tape is continuously monitored by a fiber optic monitor which generates an alarm in the CCR when the proper color is achieved. Rips or tears in the paper tape will cause a fiber optic monitor to generate a false alarm. The cause of all occurrences was due to either tears or rips of the paper tape.

CORRECTIVE ACTION:

- 1) Immediate corrective actions included repair of the paper tape and the replacement of the paper tape cassette.
- 2) To eliminate improper tape installation as a cause of the problem, the plant operators have been provided with additional training regarding performing tape replacement and assuring that the tape is properly fed through the monitor.
- 3) Until such time that the problem is corrected, the frequency for checking the monitors has been increased from 8 hours to once every 4 hours. This is to ensure that the tape is being properly fed through the monitor.
- 4) Our long term corrective action plan will be to pursue the elimination of the requirement for the HCN toxic gas monitors from the Technical Specifications.