

## LICENSEE EVENT REPORT (LER)

|   |                                      |                            |
|---|--------------------------------------|----------------------------|
| FACILITY NAME (1)<br><b>Indian Point Unit 3</b> | DOCKET NUMBER (2)<br><b>05000286</b> | PAGE (3)<br><b>1 OF 11</b> |
|---|--------------------------------------|----------------------------|

TITLE (4) **Missed Preventive Maintenance on 31, 32 and 33 Emergency Diesel Generators, Due To Personnel Error, Resulted in a Violation of Technical Specifications**

| 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                 |   |  |  |  |  |  |  |  |  |  |  |                                |  |  |           |  |  |           |  |  |                 |  |          |                                |  |  |                 |  |  |             |  |  |                |  |          |  |  |  |                  |  |  |             |  |  |                  |  |       |  |  |  |                   |  |  |  |  |  |                      |  |   |  |  |  |                  |  |  |                 |  |  |                      |  |  |  |  |                 |  |  |                  |  |  |                |  |
| 05  | 10  | 93   | 93                | -- 019 --         | 01              | 10   | 06  | 93   | FACILITY NAME                 | DOCKET NUMBER<br><b>05000</b> |   |  |  |  |  |  |  |  |  |  |  |                                |  |  |           |  |  |           |  |  |                 |  |          |                                |  |  |                 |  |  |             |  |  |                |  |          |  |  |  |                  |  |  |             |  |  |                  |  |       |  |  |  |                   |  |  |  |  |  |                      |  |   |  |  |  |                  |  |  |                 |  |  |                      |  |  |  |  |                 |  |  |                  |  |  |                |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="11">THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</td> </tr> <tr> <td colspan="3">OPERATING MODE (9)<br/><b>N</b></td> <td colspan="3">20.402(b)</td> <td colspan="3">20.405(c)</td> <td colspan="2">50.73(a)(2)(iv)</td> <td>73.71(b)</td> </tr> <tr> <td colspan="3">POWER LEVEL (10)<br/><b>000</b></td> <td colspan="3">20.405(a)(1)(i)</td> <td colspan="3">50.36(c)(1)</td> <td colspan="2">50.73(a)(2)(v)</td> <td>73.71(c)</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(ii)</td> <td colspan="3">50.36(c)(2)</td> <td colspan="2">50.73(a)(2)(vii)</td> <td>OTHER</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(iii)</td> <td colspan="3"><input checked="" type="checkbox"/> 50.73(a)(2)(i)</td> <td colspan="2">50.73(a)(2)(viii)(A)</td> <td rowspan="3">(Specify in Abstract below and in Text, NRC Form A)</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(iv)</td> <td colspan="3">50.73(a)(2)(ii)</td> <td colspan="2">50.73(a)(2)(viii)(B)</td> </tr> <tr> <td colspan="3"></td> <td colspan="3">20.405(a)(1)(v)</td> <td colspan="3">50.73(a)(2)(iii)</td> <td colspan="2">50.73(a)(2)(x)</td> </tr> </table> |     |      |                   |                   |                 |  |     |      |                               |                               | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11) |  |  |  |  |  |  |  |  |  |  | OPERATING MODE (9)<br><b>N</b> |  |  | 20.402(b) |  |  | 20.405(c) |  |  | 50.73(a)(2)(iv) |  | 73.71(b) | POWER LEVEL (10)<br><b>000</b> |  |  | 20.405(a)(1)(i) |  |  | 50.36(c)(1) |  |  | 50.73(a)(2)(v) |  | 73.71(c) |  |  |  | 20.405(a)(1)(ii) |  |  | 50.36(c)(2) |  |  | 50.73(a)(2)(vii) |  | OTHER |  |  |  | 20.405(a)(1)(iii) |  |  | <input checked="" type="checkbox"/> 50.73(a)(2)(i) |  |  | 50.73(a)(2)(viii)(A) |  | (Specify in Abstract below and in Text, NRC Form 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) |  |
| THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)   |     |      |                   |                   |                 |  |     |      |                               |                               |   |  |  |  |  |  |  |  |  |  |  |                                |  |  |           |  |  |           |  |  |                 |  |          |                                |  |  |                 |  |  |             |  |  |                |  |          |  |  |  |                  |  |  |             |  |  |                  |  |       |  |  |  |                   |  |  |  |  |  |                      |  |   |  |  |  |                  |  |  |                 |  |  |                      |  |  |  |  |                 |  |  |                  |  |  |                |  |
| OPERATING MODE (9)<br><b>N</b>  |     |      | 20.402(b)         |                   |                 | 20.405(c)  |     |      | 50.73(a)(2)(iv)               |                               | 73.71(b)  |  |  |  |  |  |  |  |  |  |  |                                |  |  |           |  |  |           |  |  |                 |  |          |                                |  |  |                 |  |  |             |  |  |                |  |          |  |  |  |                  |  |  |             |  |  |                  |  |       |  |  |  |                   |  |  |  |  |  |                      |  |   |  |  |  |                  |  |  |                 |  |  |                      |  |  |  |  |                 |  |  |                  |  |  |                |  |
| POWER LEVEL (10)<br><b>000</b>  |     |      | 20.405(a)(1)(i)   |                   |                 | 50.36(c)(1)  |     |      | 50.73(a)(2)(v)                |                               | 73.71(c)  |  |  |  |  |  |  |  |  |  |  |                                |  |  |           |  |  |           |  |  |                 |  |          |                                |  |  |                 |  |  |             |  |  |                |  |          |  |  |  |                  |  |  |             |  |  |                  |  |       |  |  |  |                   |  |  |  |  |  |                      |  |   |  |  |  |                  |  |  |                 |  |  |                      |  |  |  |  |                 |  |  |                  |  |  |                |  |
|   |     |      | 20.405(a)(1)(ii)  |                   |                 | 50.36(c)(2)  |     |      | 50.73(a)(2)(vii)              |                               | OTHER   |  |  |  |  |  |  |  |  |  |  |                                |  |  |           |  |  |           |  |  |                 |  |          |                                |  |  |                 |  |  |             |  |  |                |  |          |  |  |  |                  |  |  |             |  |  |                  |  |       |  |  |  |                   |  |  |  |  |  |                      |  |   |  |  |  |                  |  |  |                 |  |  |                      |  |  |  |  |                 |  |  |                  |  |  |                |  |
|   |     |      | 20.405(a)(1)(iii) |                   |                 | <input checked="" type="checkbox"/> 50.73(a)(2)(i) |     |      | 50.73(a)(2)(viii)(A)          |                               | (Specify in Abstract below and in Text, NRC Form 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<br><b>William A. Carano, Maintenance Manager</b> | TELEPHONE NUMBER (Include Area Code)<br><b>(914) 736-8601</b> |
|---|---|

**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 |
|-------|--------|-----------|--------------|---------------------|-------|--------|-----------|--------------|---------------------|
|       |        |           |              | N                   |       |        |           |              |                     |
|       |        |           |              |                     |       |        |           |              |                     |

**SUPPLEMENTAL REPORT EXPECTED (14)**

|   |                                     |    |                               |       |     |      |
|---|-------------------------------------|----|-------------------------------|-------|-----|------|
| YES<br>(If yes, complete EXPECTED SUBMISSION DATE). | <input checked="" type="checkbox"/> | NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
|   |                                     |    |                               |       |     |      |

### ABSTRACT

On May 10, 1993, with the plant in the cold shutdown condition, maintenance personnel determined that the preventive maintenance (PM) on 33 Emergency Diesel Generator (EDG) had not been performed in accordance with the vendor recommended frequency. The recommended 12 year maintenance inspection had not been performed for all three EDGs when it was due on December 12, 1987. This is a violation of Technical Specification 4.6.A.4. The cause of the event is personnel error in judgement that resulted in misinterpretation of GE-ALCO (vendor) instructions for standby engine maintenance. Corrective actions include training of maintenance engineering and management personnel, a complete review of the vendor recommended maintenance/surveillance/testing matrix and concurrence by the vendor that this matrix is acceptable for maintaining the ALCO Diesels for standby service. The PMs on all three EDGs will be current and in compliance with the vendor recommendations prior to start-up from the present Performance Improvement Program Outage. The 12 year PM is complete for the three EDGs (33 EDG was declared operable on August 24, 1993 after its 12 year PM was completed).

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

|                     |                   |                |                   |                 |          |
|---------------------|-------------------|----------------|-------------------|-----------------|----------|
| FACILITY NAME (1)   | DOCKET NUMBER (2) | LER NUMBER (6) |                   |                 | PAGE (3) |
| Indian Point Unit 3 | 05000286          | YEAR           | SEQUENTIAL NUMBER | REVISION NUMBER | 2 OF 11  |
|                     |                   | 93             | --019--           | 01              |          |

DESCRIPTION OF EVENT

On May 10, 1993, at 2030 hours, while the plant was at cold shutdown with reactor coolant temperature and pressure at 112 °F and 0 psig respectively, 33 Emergency Diesel Generator (EDG) (EK) (DG) was declared inoperable because maintenance personnel discovered that the recommended 12 year preventive maintenance (PM) inspection had not been performed when it was due on December 12, 1987. This is a violation of Technical Specification 4.6.A.4. Technical Specification 4.6.A.4 states that, "Each diesel generator shall be inspected and maintained following the manufacturer's recommendations for this class of stand-by service." The vendor manual states that "After the warranty period, the adjustment of the suggested maintenance intervals to fit prevailing operating conditions is the responsibility of the user." The warranty period for Indian Point 3's emergency diesels was one year.

Further investigation into this event revealed that the 12 year PM had not been performed within the required frequency for all three EDGs (i.e., 31, 32 and 33). This investigation also revealed a number of discrepancies between GE-ALCO's recommended frequency for performing inspection and maintenance activities and the Authority's frequency for performing the inspection and maintenance activities. There were instances in which the Authority performed the required inspection or maintenance at a frequency greater than the ALCO recommended frequency. Table 1 provides a matrix of the inspection and maintenance items with the required ALCO frequency and the Authority's frequency for performing the inspection or maintenance activity. As discussed in corrective action #2 below, the Authority committed to resolve all discrepancies and is developing Administrative Procedure AP-22.3, "Emergency Diesel Generator Inspection and Maintenance Schedule" which will serve to control any changes to the matrix.

This LER transmits the current matrix to demonstrate that the NYPA and GE-ALCO inspection/maintenance activities are in agreement. Any future changes to this matrix will not require a revision to this LER or a submittal for review by the Commission because AP-22.3 will assure that the matrix is revised according to the vendors recommendations if a less conservative change is required.

The 12 year interval for vendor recommended maintenance of the GE Locomotives Canada-ALCO 251 engines began on December 12, 1975, the day Indian Point 3's Technical Specifications became effective. Therefore, the 12 year PM inspection on the EDGs became due on December 12, 1987.

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

| FACILITY NAME (1)   | DOCKET NUMBER (2) | LER NUMBER (6) |                   |                 | PAGE (3) |
|---------------------|-------------------|----------------|-------------------|-----------------|----------|
| Indian Point Unit 3 | 05000286          | YEAR           | SEQUENTIAL NUMBER | REVISION NUMBER | 3 OF 11  |
|                     |                   | 93             | -- 019 --         | 01              |          |

In Inspection Report No. 50-286/88-21, the NRC cited the Authority for a violation of Technical Specification 4.6.A.4, specifically because, Indian Point 3 procedures did not address the long term diesel engine maintenance recommendations. As a result, the Authority agreed to implement a two phase program for emergency diesel generator maintenance. Phase I was to incorporate a revised standby preventive maintenance program. ALCO was retained to provide enhancements to the existing program. Phase II would revise procedures necessary to address the requirements of the new program. After reviewing the new ALCO engine maintenance program, IP3 management decided to revise the ALCO suggested 12 year inspection frequency to 14 years, and to perform this inspection during refueling outages, one diesel each refueling outage, starting with 31 EDG during the cycle 7/8 refueling outage. These decisions were based on engineering judgment and the interpretation of a statement in the ALCO manual which says, "The maintenance intervals (engine hours and times) are suggestions based on ALCO's experience. They are not to be interpreted as an implied warranty of service life. They can be expected to vary depending on the level of maintenance, load duty cycle, environmental conditions, engine rating and climatic and operating conditions imposed by the user." This statement in conjunction with verbal communications with the vendor of our intent and their seeming agreement and the fact that:

- the run hours on Indian Point 3's emergency diesels are slightly less than the minimum ALCO expectations
- quarterly, semi-annual and annual maintenance is performed on each of the emergency diesels.
- a comprehensive testing program exists at IP3 which covers both operations and performance indicators of the engines on a monthly basis.
- System Operating Procedures (SOP) which direct operators to review readings for essential equipment and give allowable tolerances for all equipment.
- operational history which was cited as "exceptional" with only three start failures in 1151 starts (as of September 1989).

On May 20, 1993, the vendor (GE-ALCO) was contacted for an interpretation of the statement in the vendor manual which says that the adjustment of the suggested maintenance intervals to fit prevailing operating conditions is the responsibility of the user. The vendor responded that the statement was included in the vendor manual only to protect the vendor from any liability concerns.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

| FACILITY NAME (1)   | DOCKET NUMBER (2) | LER NUMBER (6) |                   |                 | PAGE (3) |
|---------------------|-------------------|----------------|-------------------|-----------------|----------|
|                     |                   | YEAR           | SEQUENTIAL NUMBER | REVISION NUMBER |          |
| Indian Point Unit 3 | 05000286          | 93             | --019--           | 01              | 4 OF 11  |

CAUSE OF THE EVENT

The cause of this event was personnel error in judgement that resulted in misinterpretation of GE-ALCO's instructions for standby engine maintenance. The decisions to defer the PM inspections were narrowly focused on the technical merits, which are sound, without a correspondingly sound analysis of the regulatory compliance implications.

CORRECTIVE ACTIONS

The following corrective actions will be performed in order to prevent recurrence of this event:

1. Maintenance engineers and managers who are responsible for performing evaluations that affect safety have been trained on 10 CFR 50.59 and 10 CFR 50.92 requirements that govern changes to FSAR and technical specifications.
2. A complete review of the ALCO Engine Maintenance Schedule (Diesel Matrix) has been performed to verify that all maintenance/testing/surveillance activities required by the vendor are included in a station procedure and that maintenance, surveillance and testing is being performed within the manufacturer's recommended interval. All discrepancies have been resolved with the vendor.
3. The PMs on all three EDGs will be current and in compliance with the vendor recommendations prior to start-up from the present Performance Improvement Program Outage. The operational dates following the 12 year PMs on 31 and 32 EDGs were November 29, 1990 and June 11, 1992 respectively. The 33 EDG was declared operable on August 24, 1993 after its 12 year PM was completed.

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

|                          |                          |                       |                      |                    |                 |
|--------------------------|--------------------------|-----------------------|----------------------|--------------------|-----------------|
| <b>FACILITY NAME (1)</b> | <b>DOCKET NUMBER (2)</b> | <b>LER NUMBER (6)</b> |                      |                    | <b>PAGE (3)</b> |
| Indian Point Unit 3      | 05000286                 | YEAR                  | SEQUENTIAL<br>NUMBER | REVISION<br>NUMBER | 5 OF 11         |
|                          |                          | 93                    | -- 019 --            | 01                 |                 |

**ANALYSIS OF THE EVENT**

This event is reportable under 10 CFR 50.73(a)(2)(i)(B). The licensee shall report any operation or condition prohibited by the plant's technical specifications. Technical specification section 4.6.A.4 states that "Each diesel generator shall be inspected and maintained following the manufacturer's recommendations for this class of stand-by service." The 12 year vendor recommended preventive maintenance for the EDGs was not performed as required on December 12, 1987. A similar event, a missed preventive maintenance on fan cooler units, was reported in LER-93-013-01. LER 93-020-00 reported a missed PM on the EDG air start system and LER 93-024-00 reported an exceeded PM on the 32 EDG governor.

**SAFETY SIGNIFICANCE**

This event did not affect the health and safety of the public. The EDGs are installed to provide backup power to essential equipment required to mitigate the consequences of design basis events and maintain the plant in a shut down condition. Any two of the three available diesels are capable of providing this function. Throughout the period in question two diesels were generally available to perform these safety functions. Monthly, quarterly, semiannual and annual PMS and tests demonstrated the operability of all three diesels.

The extent of condition of this event will be addressed by Performance Improvement Plan Item # 174, "Enhancement of Station PM Program". Using this PIP item, the Authority will systematically review and evaluate plant systems and components for their potential inclusion in the PM program. The Authority will then review the vendor manuals for these systems and make the appropriate changes to existing PM procedures or develop new ones as required to ensure that they are performing the appropriate PMS on these systems.

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

|                          |  |                          |                       |                                       |                              |
|--------------------------|--|--------------------------|-----------------------|---------------------------------------|------------------------------|
| <b>FACILITY NAME (1)</b> |  | <b>DOCKET NUMBER (2)</b> | <b>LER NUMBER (6)</b> |                                       | <b>PAGE (3)</b>              |
| Indian Point Unit 3      |  | 05000286                 | <b>YEAR</b><br>93     | <b>SEQUENTIAL NUMBER</b><br>-- 019 -- | <b>REVISION NUMBER</b><br>01 |
|                          |  |                          |                       |                                       | 6 OF 11                      |

**TABLE 1**  
Matrix of the Inspection and Maintenance Items Showing the Required ALCO Frequency and the Authority's Frequency

| ITEM # | ACTIVITY DESCRIPTION                                 | ALCO FREQUENCY     | NYP&A FREQUENCY  |
|--------|--|--------------------|--|
| 1      | Record starting air pressure                         | STANDBY 1/SHIFT    | 1/SHIFT  |
| 2      | Record jacket water temperature                      | STANDBY 1/SHIFT    | 1/SHIFT  |
| 3      | Record jacket water expansion tank level             | STANDBY 1/SHIFT    | 1/SHIFT  |
| 4      | Record lube oil temperature                          | STANDBY 1/SHIFT    | 1/SHIFT  |
| 5      | Ensure prelube pump is operating                     | STANDBY 1/SHIFT    | 1/SHIFT  |
| 6      | Record the engine lube oil crankcase level           | STANDBY 1/SHIFT    | 1/SHIFT  |
| 7      | Record fuel oil day tank level                       | STANDBY 1/SHIFT    | 1/SHIFT  |
| 8      | Test all indicator lights using the lamp test button | STANDBY 1/DAY      | 1/SHIFT  |
| 9      | Check governor oil level                             | STANDBY 1/DAY      | 1/SHIFT  |
| 10     | Check oil level in air compressor                    | STANDBY 1/WEEK     | 1/WEEK   |
| 11     | Check oil level in air start motor lubricator        | STANDBY 1/WEEK     | 1/WEEK   |
| 12     | Take a lube oil sample                               | STANDBY 1/MONTH    | 1/MONTH  |
| 13     | Take a fuel oil sample                               | STANDBY 1/MONTH    | 2/MONTH  |
| 14     | Make a general inspection of piping                  | STANDBY 1/MONTH    | 1/MONTH  |
| 15     | Record starting air pressure                         | OPERATIONAL 1/HOUR | OPERATIONAL 1/30 MINS  |
| 16     | Record jacket water temperature                      | OPERATIONAL 1/HOUR | OPERATIONAL 1/30 MINS  |
| 17     | Record jacket water expansion tank level             | OPERATIONAL 1/HOUR | OPERATIONAL 1/30 MINS  |
| 18     | Record jacket water pressure                         | OPERATIONAL 1/HOUR | OPERATIONAL 1/30 MINS  |
| 19     | Record engine ambient air inlet temperature          | OPERATIONAL 1/HOUR | OPERATIONAL 1/30 MINS  |
| 20     | Record cylinder exhaust temperature                  | OPERATIONAL 1/HOUR | OPERATIONAL 1/30 MINS  |
| 21     | Record air manifold pressure                         | OPERATIONAL 1/HOUR | OPERATIONAL 1/30 MINS  |
| 22     | Record engine crankcase vacuum                       | OPERATIONAL 1/HOUR | NONE (Indian Point 3 is not instrumented to record this parameter at this time. ALCO recommends the installation of a vacuum gauge at NYP&A's convenience. |

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

|                          |                          |                       |                                |                       |
|--------------------------|--------------------------|-----------------------|--------------------------------|-----------------------|
| <b>FACILITY NAME (1)</b> | <b>DOCKET NUMBER (2)</b> | <b>LER NUMBER (6)</b> |                                | <b>PAGE (3)</b>       |
| Indian Point Unit 3      | 05000286                 | YEAR<br>93            | SEQUENTIAL NUMBER<br>-- 019 -- | REVISION NUMBER<br>01 |
|                          |                          |                       |                                | 7 OF 11               |

| ITEM # | ACTIVITY DESCRIPTION   | ALCO FREQUENCY      | HYPA FREQUENCY        |
|--------|--|---------------------|-----------------------|
| 23     | Record load on engine  | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 24     | Record engine FREQUENCY (HERTZ)  | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30MINS  |
| 25     | Record fuel pump rack indication of one fuel pump                                | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 26     | Record fuel oil day tank level   | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 27     | Record fuel oil header pressure  | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 28     | Record lube oil temperature  | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 29     | Record lube oil header pressure  | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 30     | Check engine base oil level  | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 31     | Record lube oil filter differential pressure                                     | OPERATIONAL 1/HOUR  | OPERATIONAL 1/30 MINS |
| 32     | Check "tell-tale" drain pipes on all pumps and coolers                           | OPERATIONAL 1/SHIFT | OPERATIONAL 1/30 MINS |
| 33     | Check cooling water system for leaks   | OPERATIONAL 1/SHIFT | OPERATIONAL 1/30 MINS |
| 34     | Check governor oil level   | OPERATIONAL 1/SHIFT | OPERATIONAL 1/30 MINS |
| 35     | Check fuel oil system for leaks  | OPERATIONAL 1/SHIFT | OPERATIONAL 1/30 MINS |
| 36     | Check lube oil system for leaks  | OPERATIONAL 1/SHIFT | OPERATIONAL 1/30 MINS |
| 37     | Record fuel pump rack indication on all cylinders                                | OPERATIONAL 2/YEAR  | 2/YEAR                |
| 38     | Record cylinder compression pressures  | OPERATIONAL 2/YEAR  | 2/YEAR                |
| 39     | Operate engine allowing unit to warm up to normal operating temperatures         | TESTING 1/MONTH     | 1/MONTH               |
| 40     | Operate engine at full load and record cylinder firing pressures                 | OPERATIONAL 2/YEAR  | OPERATIONAL 2/YEAR    |
| 41     | Check engine coolant for proper concentration of water treatment                 | MAINTENANCE 24/YEAR | 24/YEAR               |
| 42     | Inspect air starting motor, lubricator and drive                                 | MAINTENANCE 4/YEAR  | 4/YEAR                |
| 43     | Inspect air compressor and service in accordance w/ manufacturer's instructions. | MAINTENANCE 4/YEAR  | 4/YEAR                |
| 44     | Check operation of jacket water immersion heaters                                | MAINTENANCE 4/YEAR  | 1/SHIFT & 4/YEAR      |

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

|  |                                   |                |                                |                         |
|--|-----------------------------------|----------------|--------------------------------|-------------------------|
| FACILITY NAME (1)<br><br>Indian Point Unit 3 | DOCKET NUMBER (2)<br><br>05000286 | LER NUMBER (6) |                                | PAGE (3)<br><br>8 OF 11 |
|  |                                   | YEAR<br>93     | SEQUENTIAL NUMBER<br>-- 019 -- |                         |

| ITEM # | ACTIVITY DESCRIPTION   | ALCO FREQUENCY        | NYP&A FREQUENCY |
|--------|--|-----------------------|-----------------|
| 45     | Clean and service engine air filters   | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 46     | Inspect crankcase  | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 47     | Inspect and lubricate fuel racks, crossover linkage and fuel pump rack arms. Inspect for wear and corrosion. Correct as required | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 48     | Check tightness of all exhaust and air manifold fittings   | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 49     | Sample and test fuel oil   | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 50     | Drain condensate from fuel tanks   | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 51     | Clean fuel oil filter (strainer)   | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 52     | Sample engine lube oil   | OPERATIONAL 4/YEAR    | 1/MONTH         |
| 53     | Check operation of lube oil immersion heaters  | MAINTENANCE 4/YEAR    | 4/YEAR          |
| 54     | Inspect raw water side of heat exchangers  | MAINTENANCE 2/YEAR    | 2/YEAR          |
| 55     | Check zinc anode plates or plugs, inspect and replace as required.   | MAINTENANCE 2/YEAR    | 2/YEAR          |
| 56     | Clean and lubricate air start motor Bendix drive assembly  | MAINTENANCE 2/YEAR    | 2/YEAR          |
| 57     | Check crankshaft deflection and thrust   | MAINTENANCE 1/YEAR    | 1/YEAR          |
| 58     | Check uniformity of rack setting   | MAINTENANCE 1/YEAR    | 2/YEAR          |
| 59     | Check tightness of engine and generator hold down bolts  | MAINTENANCE 1/YEAR    | 2/YEAR          |
| 60     | Check valve clearances, adjust if required   | MAINTENANCE 1/YEAR    | 1/YEAR          |
| 61     | Check fuel pump timing, adjust if required   | MAINTENANCE 1/YEAR    | 2/YEAR          |
| 62     | Inspect air side of aftercooler. Remove, clean and hydrostatically test if necessary.  | MAINTENANCE 1/YEAR    | 1/YEAR          |
| 63     | Inspect crankcase exhauster. Remove, and clean housing, impeller and piping if required.   | MAINTENANCE 1/YEAR    | 1/YEAR          |
| 64     | Clean lube oil strainer  | MAINTENANCE 1/YEAR    | 2/YEAR          |
| 65     | Drain and flush governor   | MAINTENANCE 1/YEAR    | 1/YEAR          |
| 66     | Inspect turbocharger intake inducer blading and take turbo rotor shaft thrust clearance reading. Repair or replace as required.  | MAINTENANCE 1/YEAR    | 1/YEAR          |
| 67     | Inspect turbocharger air intake silencer housing, tubing, boots and fittings   | MAINTENANCE 1/YEAR    | 1/YEAR          |
| 68     | Check operation of engine low oil pressure protective device   | MAINTENANCE 1/2 YEARS | 1/2 YEARS       |
| 69     | Check operation of high jacket water temperature protective device   | MAINTENANCE 1/2 YEARS | 1/2 YEARS       |
| 70     | Test engine alarms   | MAINTENANCE 1/2 YEARS | 1/2 YEARS       |
| 71     | Check operation and calibration of starting air pressure gage. EAST 2371, 2372, 2373; WEST 2341, 2342, 2343                      | MAINTENANCE 1/2 YEARS | 1/2 YEARS       |



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

|                          |                          |                       |                                   |                          |                 |
|--------------------------|--------------------------|-----------------------|-----------------------------------|--------------------------|-----------------|
| <b>FACILITY NAME (1)</b> | <b>DOCKET NUMBER (2)</b> | <b>LER NUMBER (6)</b> |                                   |                          | <b>PAGE (3)</b> |
| Indian Point Unit 3      | 05000286                 | YEAR<br>93            | SEQUENTIAL<br>NUMBER<br>-- 019 -- | REVISION<br>NUMBER<br>01 | 9 OF 11         |

|  |
|--|
|  |
|--|

| ITEM # | ACTIVITY DESCRIPTION  | ALCO FREQUENCY            | NUPA FREQUENCY |
|--------|---|---------------------------|----------------|
| 72     | Check operation and calibration of jacket water pressure gage   | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 73     | Check operation and calibration of air manifold pressure gage   | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 74     | Check operation and calibration of fuel oil pressure gage   | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 75     | Check operation and calibration of lube oil pressure gage   | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 76     | Check operation and calibration of raw water inlet temperature gage TI-1306, 1307, 1308                         | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 77     | Check operation and calibration of jacket water outlet temperature gage TI-2251, 2252, 2253                     | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 78     | Check operation and calibration of raw water outlet temperature gage TI-1281, 1282, 1283                        | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 79     | Check operation and calibration of jacket water inlet temperature gage TI-2231, 2232, 2233                      | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 80     | Check operation and calibration of lube oil temperature gage  | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 81     | Check operation and calibration of lube oil cooler inlet temperature gage TI-1174-1,2,3                         | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 82     | Check operation and calibration of lube oil cooler outlet temperature gage TI-1175-1,2,3                        | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 83     | Check operation and calibration of pyrometer  | MAINTENANCE 1/2<br>YEARS  | 1/2 YEARS      |
| 84     | Remove air start assembly and thoroughly clean air start motor replacing all seats and gaskets                  | MAINTENANCE 1/3<br>YEARS  | 1/3 YEARS      |
| 85     | Drain, flush, and refill governor   | MAINTENANCE 1/6<br>YEARS  | 1/6 YEARS      |
| 86     | Remove, recondition, test, and reapply fuel injection nozzles   | MAINTENANCE 1/6<br>YEARS  | 1/6 YEARS      |
| 87     | Check condition of fuel pump drive  | MAINTENANCE 1/6<br>YEARS  | 1/6 YEARS      |
| 88     | Inspect governor drive and gear backlash  | MAINTENANCE 1/6<br>YEARS  | 1/6 YEARS      |
| 89     | Boroscope inspect liners and cylinder heads and repair as required. Renew all seals, gaskets and rubber tubing. | MAINTENANCE 1/6<br>YEARS  | 1/6 YEARS      |
| 90     | Drain, clean, and refill lube oil system. Inspect cooler, sump, filter, and strainer.                           | MAINTENANCE 12 YEARS      | 12 YEARS       |
| 91     | Inspect water and lubricating oil pump gears and backlash   | MAINTENANCE 1/12<br>YEARS | 1/12 YEARS     |
| 92     | Inspect and clean turbocharger  | MAINTENANCE 1/12<br>YEARS | 1/12 YEARS     |

|  |
|--|
|  |
|--|

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

|                          |  |                          |                       |                          |                        |
|--------------------------|--|--------------------------|-----------------------|--------------------------|------------------------|
| <b>FACILITY NAME (1)</b> |  | <b>DOCKET NUMBER (2)</b> | <b>LER NUMBER (6)</b> |                          | <b>PAGE (3)</b>        |
| Indian Point Unit 3      |  | 05000286                 | <b>YEAR</b>           | <b>SEQUENTIAL NUMBER</b> | <b>REVISION NUMBER</b> |
|                          |  |                          | 93                    | -- 019 --                | 01                     |
|                          |  |                          |                       |                          | 10 OF 11               |

| ITEM # | ACTIVITY DESCRIPTION   | ALCO FREQUENCY         | NYPA FREQUENCY |
|--------|--|------------------------|----------------|
| 93     | Recondition fuel pumps   | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 94     | Inspect camshafts  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 95     | Inspect and recondition fuel pump supports   | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 96     | Remove governor, drain, flush, and recondition   | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 97     | Remove, inspect, and reapply cylinder heads  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 98     | Remove, inspect, and reapply pistons and rods  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 99     | Remove, inspect, and reapply liners  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 100    | Replace all seals, gaskets, and rubber tubing  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 101    | Replace rod bearings and piston rings  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 102    | Renew hoses and couplings used in lube oil system  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 103    | Clean lube oil cooler, oil side  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 104    | Remove, recondition, and reapply lube oil regulating valves  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 105    | Remove, recondition, and reapply lube oil priming pump   | MAINTENANCE 1/12 YEARS | 1/YEAR         |
| 106    | Renew upper header check valves  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 107    | Remove, clean, and test lube oil heaters   | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 108    | Renew hoses and flexible couplings in fuel oil system  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 109    | Remove and recondition fuel oil regulating valves  | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 110    | Renew hoses and flexible couplings used in cooling water system                                      | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 111    | Remove, recondition, and reapply jacket water temperature regulating valves                          | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |
| 112    | Remove, recondition, and reapply air system relief valves, air pressure reducer and air start valves | MAINTENANCE 1/12 YEARS | 1/12 YEARS     |

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

|                          |  |                          |                       |                          |                        |
|--------------------------|--|--------------------------|-----------------------|--------------------------|------------------------|
| <b>FACILITY NAME (1)</b> |  | <b>DOCKET NUMBER (2)</b> | <b>LER NUMBER (6)</b> |                          | <b>PAGE (3)</b>        |
| Indian Point Unit 3      |  | 05000286                 | <b>YEAR</b>           | <b>SEQUENTIAL NUMBER</b> | <b>REVISION NUMBER</b> |
|                          |  |                          | 93                    | -- 019 --                | 01                     |
|                          |  |                          |                       |                          | 11 OF 11               |

| ITEM # | ACTIVITY DESCRIPTION   | ALCO FREQUENCY         | NYP&A FREQUENCY |
|--------|--|------------------------|-----------------|
| 113    | Remove, recondition and reapply Water pumps.   | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 114    | Remove, recondition and reapply Turbocharger.  | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 115    | Remove, recondition and reapply Cylinder heads and valves.                           | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 116    | Remove, recondition and reapply Power Assemblies.                                    | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 117    | Remove, recondition and reapply fuel pump drives.                                    | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 118    | Remove, recondition and reapply fuel injection pumps.                                | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 119    | Remove, recondition and reapply engine governor.                                     | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 120    | Remove, recondition and reapply Lube oil pump.                                       | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 121    | Remove, recondition and reapply Aftercooler assembly.                                | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 122    | Replace all main bearing and thrust bearing shells.                                  | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 123    | Inspect the Exhaust manifold for signs of wear.                                      | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 124    | Inspect the camshaft and camshaft gear train for wear.                               | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 125    | Inspect the Crankshaft journals, thrust collars and thrust surfaces for wear.        | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 126    | Inspect the Camshaft vibration dampers for wear, if used.                            | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 127    | Inspect Overspeed Mechanism  | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |
| 128    | Remove and recondition fuel oil transfer pump, screening, and filter system if used. | MAINTENANCE 1/24 YEARS | 1/24 YEARS      |