February 12, 2014

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555 - 0001

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Licensee Event Report (LER) 2013-004-00, Manual SCRAM due to rise in Reactor Pressure during Turbine Valve Testing

Enclosed is LER 2013-004-00, Manual SCRAM due to rise in Reactor Pressure during Turbine Valve Testing. This event did not affect the health and safety of the public or plant personnel. This event did not result in a safety system functional failure. There are no regulatory commitments made in this LER submittal.

Should you have any questions concerning this letter, please contact Mike McKenna, Regulatory Assurance Manager, at (609) 971-4389.

Respectfully,

[Signature]
Russell R. Peak
Plant Manager
Oyster Creek Nuclear Generating Station

Enclosure: NRC Form 366, LER 2013-004-00

cc: Administrator, NRC Region 1
NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station
NRC Project Manager - Oyster Creek Nuclear Generating Station
On 12/14/13 at approximately 0336 EST, during quarterly turbine valve testing with reactor power at 95% of rated thermal power, the plant experienced reactor pressure control abnormalities. Turbine Control Valves 2 and 3 failed closed due to the Servo Motor Feedback Support Bracket bolts backing out and falling out thereby requiring a scram. Operators initiated a manual reactor scram due to reactor pressure rising to 1042 psig which approached the scram set point.

These conditions were corrected during 1F33. These were determined during complex troubleshooting as the failures that drove the event. The root cause determined that the manufacturer failed to assemble the Control Valve Hydraulic Enclosure per their design.

There were no safety consequences impacting the plant or public safety as a result of this event. All control rods fully inserted and plant response was as expected. This event is being reported pursuant to 10CFR50.73(a)(2)(iv)(A) due to an actuation of the Reactor Protection System (RPS).
## Licensee Event Report (LER) Continuation Sheet

**Oyster Creek, Unit 1**

### Plant Conditions Prior To Event

<table>
<thead>
<tr>
<th>Event Date:</th>
<th>December 14, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1 Mode:</td>
<td>Power Operation</td>
</tr>
<tr>
<td>Power Level:</td>
<td>95%</td>
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</tbody>
</table>

**Event Time:** 0336 EST

**Power Level:** 95%

### Description of Event

On 12/14/13 at approximately 0336 EST, during quarterly turbine valve testing with reactor power at 95% of rated thermal power, the plant experienced reactor pressure control abnormalities. Turbine Control Valves 2 and 3 failed closed due to the Servo Motor Feedback Support Bracket bolts backing out and falling out thereby requiring a scram. Operators initiated a manual reactor scram due to reactor pressure rising to 1042 psig which approached the scram set point.

Turbine Control Valve (TCV) 2 and 3 Servo Motor feedback lever brackets became loose and then detached from their supports. Also identified was that a vertical connection to transmit the required Turbine Bypass Valve (TBV) relay position from the Turbine Front Standard to the Bypass Valve Assembly became detached.

The failure of the TBV control connection was a lack of effective application of vendor maintenance direction. The immediate corrective action was completed as part of 1F33. The TBV clevis and push/pull rod connections were adjusted to meet OEM required minimum thread engagement and the jamb nuts were secured from rotation per OEM vendor recommendation.

### Cause of Event

The OEM during manufacture did not follow their assembly drawings and installed inappropriate locking mechanisms (split washers) instead of the assembly drawing required parts (lock plates).

The failure of the TBV control connection was a lack of effective application of vendor maintenance direction. The resulting investigation determined that the primary failures associated with TCV-2/3 inside the Control Valve Hydraulic Enclosure (CVHE) (General Electric Part number 715E847) were due to a lack of the equipment configuration to meet OEM requirements.

The root cause determined that the manufacturer failed to assemble the Control Valve Hydraulic Enclosure per there design.

### Analysis of Event

This issue resulted in a manual reactor SCRAM with the ensuing 1F33 forced outage. Without operator intervention this issue would have further challenged the equipment, operating margin and regulatory margin by driving an automatic SCRAM on high reactor pressure. This event necessitated a reactor cool down to be performed with the Isolation Condensers instead of the Turbine Bypass Valves due to Bypass Valve unavailability. There were no significant equipment problems noted related to maintaining the reactor in a safe Cold Shutdown Condition.

There were no safety consequences impacting the plant or public safety as a result of this event. All control rods fully inserted and plant response was as expected. This event is being reported pursuant to 10CFR50.73(a)(2)(iv)(A) due to an actuation of the Reactor Protection System (RPS).
NARRATIVE

Corrective Actions

The immediate corrective actions were completed as part of 1F33 which were to adjust the TBV clevis and push/pull rod connections to meet OEM required minimum thread engagement and secure the jamb nuts from rotation per OEM vendor recommendation. The corrective action was completed as part of 1F33 to implement OEM vendor design and install lock plate securing mechanisms as per vendor documentation.

The root cause determined that the manufacturer failed to assemble the Control Valve Hydraulic Enclosure per there design. Procedures are being revised to inspect for the correct configuration per the GE assembly drawings to ensure any replaced parts will maintain this configuration. PMs, specifications, and procedures that inspect, adjust, or replace the turbine control linkages are being revised to include minimum thread engagement and appropriate torque methods and values.

Previous Occurrences

There have been no similar Licensee Event Reports associated with this component failure submitted at OCNGS in the last two years.

Component Data

<table>
<thead>
<tr>
<th>Component</th>
<th>IEEE 805 System ID</th>
<th>IEEE 803A Component</th>
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<tbody>
<tr>
<td>Control Valve Hydraulic Enclosure</td>
<td>TG</td>
<td>XC</td>
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