

## RA Drop-in Briefing Sheet - Hatch

Date: August, 20, 2008

### Current Plant Performance

- Unit-1 is in the Licensee Response Column with no greater than Green inspection findings or performance indicators. Cornerstone objectives have been met.
- Unit-2 is in the Regulatory Response Column with one white HPCI MSPI. Cornerstone objectives have been met.
- No substantive cross-cutting issue(s):
- Unit-2 is vulnerable to moving up in the Action Matrix. The white MSPI will be carried until the spring of 2010.

### Key Messages of Themes

- Thoroughness Of Evaluations

#### Inboard MSIVs not seating properly

In 2005 the licensee came to the conclusion the inboard MSIVs unseated during a plant cooldown and this resulted in as-found LLRT failures. Subsequently and as a result of extensive NRC questioning including a TIA, the licensee concluded other factors including seat wear and testing methodology caused the as-found LLRT failures.

#### 1C RHR Pump discharge check valve not seating properly

Multiple attempts were required to get the check valve to seat properly. This resulted in unplanned unavailability of a mitigating system. (Criterion III – Green NCV)

#### Unit-2 HPCI response to water intrusion (directly resulted in white MSPI)

Two water intrusion events and inadequate water removal efforts resulted in corrosion of the turbine control system. (Criterion XVI -Green Finding)

#### Recent root causes show improvement

- Tritium Management and Monitoring

Tritiated subsurface water is migrating via a french drain to the Altamaha River. The licensee has permitted the french drain release point and is in compliance with the release permit. Tritium levels at this release point have been consistently above the EPA limit for drinking water. **Recent samples show improved trend.**

1. Organizational issues

None

2. Plant equipment issues

- EDG engine to generator coupling failure and degradation due to component age

SIT exited with a URI, a potential performance deficiency for poor implementation of the coupling inspection requirement. Coupling cracks have been visible for many years but no evaluation or replacement was performed. Significance is potentially greater than green depending on exposure time. The last 24 hour run was June 2006; the last rapid start was June 2008. The residents are developing the basis for which surveillance should determine the starting point for the exposure time. The

licensee is considering a test of the affected couplings to demonstrate the coupling could achieve the PRA mission time. No specific testing schedule has been confirmed.

- RHRSW flow induced vibration

Modifications to the RHRSW flow control valves in the 90's resulted in fatigue failures of piping hangers on Unit-1 and a vent valve weld failure on Unit-2. As a result, the licensee modified the flow control valves to eliminate the vibration and was successful. However, margin was lost in the total RHRSW flow available. This resulted in not being able to meet the accident analysis minimum flow requirement with a 95 degree river temperature. The licensee is having GE re-perform the calculations to restore the 95 river temperature limit and possibly gain additional margin above the 95 degree river temperature limit. Currently the 1B train of RHRSW can support operation up to 94 degrees river temperature.

- River Level

The Altamaha river level has dropped faster and earlier this year than in the previous several years. Current level is 61.6' with a TS limit of 60.7'. The Altamaha is fed from the Ocmulgee and Oconee rivers which are supplied by two Georgia Power dams. Supplemental water can be released to maintain river level; transit time is between 4 and 7 days. The licensee does river level projections weekly. The most recent projection does not forecast a need for supplemental water for greater than 30 days.

- Injuries

Injury numbers are up. INPO considers a spike in injuries is a pre-cursor to a plant event (INPO presentation at the Spring Residents Conference). Expect Dennis Madison to discuss the plants response to the increase and plans going forward to modify the organizations behavior.

3. Recent Plant Events

- Unit-2 scram due to PC testing interaction with the condensate demin valve control system. The licensees NEI 04-04 review identified the vulnerability of the demin control system being in the wrong security layer, but the specific interaction which occurred was unexpected by the licensee and the vendor of the computer hardware.
- SIT due to 1B EDG coupling failure. The licensee stopped the EDG due to high vibration.

4. Significant Inspection findings

- None current. Potential for 1B EDG coupling failure > Green

5. Allegations

- 9 last year, no notable trends.

6. Safety Culture/SCWE

- None

7. Security Issues

- None

8. Significant industry issues

- Georgia Power signed an Engineering, Procurement and Construction contract with Westinghouse for 2 AP 1000 reactors at Vogtle. The units are expected to be placed in service in 2016 and 2017. This is a potential talent drain on the operating fleet.

**RA Drop-in Briefing for Farley – Randy Johnson, Dennis Madison, Mark Ajluni**  
**Date: August 20, 2008**

**Current Plant Performance**

At the end of second quarter 2008, **Unit 1** was in the **Degraded Cornerstone** due to White MSPIs for the Cooling Water Systems and Emergency AC Power. NRC completed a 95002 inspection on June 13 with no significant findings. The inspection evaluated licensee's actions related to the White Cooling Water Systems MSPI and the parallel White PI finding related to thoroughness of evaluations and extent of condition related to 4160 volt circuit breakers. A 95001 is scheduled for the Emergency AC Power MSPI 95001 and White EDG exhaust header Finding (pending), as these issues were not ready to be inspected during the 95002.

**Unit 1** should enter the **Regulatory Response Column (Column 2)** at the end of the **3rd quarter 2008**. On June 26, 2008, the licensee implemented a modification to the Unit 1 and Unit 2 Component Cooling Water Systems which reduces overall plant risk in the event of a pump or component failure. The licensee will have operated one quarter with this modification at the end of the third quarter thus allowing the licensee to take credit for the modification per NEI 99-02 guidance. This risk reduction is anticipated to return the Cooling Water Systems MSPI to Green as of October 21, 2008. If this occurs, the White Emergency AC Power MSPI and the White Finding associated with the EDG exhaust header will be the only inputs to the Unit 1 Action Matrix. Currently, these inputs will not be double counted per MC 305.

At the end of second quarter 2008, **Unit 2** was in the **Degraded Cornerstone** due a Yellow finding on the Failed RHR encapsulated suction valve and the parallel White Finding. NRC completed a 95002 supplemental inspection on June 13 with no significant findings. The inspection also evaluated the licensee's actions related to the RHR MSPI, which returned to Green in the second quarter 2008.

**Unit 2** should return to the **Licensee Response Column (Column 1)** in the **3<sup>rd</sup> quarter 2008**. The 95002 inspection closed the Yellow finding related to the RHR valve failure and the White parallel PI finding. The White RHR MSPI was reported as Green in the 2<sup>nd</sup> quarter 2008.

**Unit 2 Planned Outages** - Refueling outage (October 19 - November 16, 2008) – Licensee plans to install high head safety injection (HHSI) throttle valves during this outage. This will complete required modification for TI-166 – PWR Containment Sump Blockage. Licensee will also inspect two nozzles on their pressurizer related to dissimilar nozzle butt welds per the requirements of a CAL issued in March, 2007. Licensee inspected all nozzles during their spring outage 2007 and performed weld overlay of the surge line nozzle.

**Substantive cross-cutting issue(s)**: None. However one additional PI&R inspection was added at the 2007 EOC and will occur in December, 2008.

**Planned Supplemental Inspections** - A 95001 inspection is scheduled for September 22 -26, 2008 for the White Emergency AC Power MSPI and the White Finding associated with the 1B EDG exhaust header failure. The MSPI was White due to failures of the 1B EDG low speed signal generator and the 1B EDG exhaust header failure resulted in the licensee reporting the Emergency AC Power MSPI as White. The preliminary White Finding was issued for an apparent violation of Tech Specs for inadequate work instructions to install the 1B EDG exhaust header. The licensee submitted a response to this Choice letter on August 14, 2008 which accepted the finding, although the exact exposure time was discussed. Using either exposure time, the SDP was White for this Finding.

### **Key Messages or Themes**

Although the 95002 did not identify any new issues or reveal any significant gaps in addressing the Degraded Cornerstone, future effectiveness reviews will be key evidence of sustained improved performance.

The scheduled 95001 and PIR will focus on looking for evidence of these improvements made to the CAP and the root cause evaluation process.

The NRC will also be looking for evidence of CAP and root cause evaluation improvements at the other SNC sites.

### **Plant Equipment Issues**

**Emergency Diesel Generator:** During the month of March 2008, Farley Unit 1 experienced two individual run failures of the 1B EDG. One failure resulted from the bearings seizing in the low speed signal generator which tripped the engine during a surveillance run. The licensee promptly replaced the generator and have since replaced the signal generators on 1-2A and 2B EDGs. The licensee has also implemented modifications to the control circuit of 1-2A and 1B EDGs to increase the reliability. This modification installed a second component signal (engine jacket water pressure) in the trip circuit in parallel with the speed signal generator.

The second failure resulted from an exhaust header failure due to improper installation of an exhaust header elbow. The licensee inspected the other two uninstalled new exhaust systems and discovered welding that did not meet their expectations. The exhaust systems were sent back to the vendor for weld repairs. The repaired exhaust systems have been installed on 1-2A and 1B EDGs. The original new exhaust system on 1B EDG was returned to the vendor.

The licensee discovered indication of failed heat exchangers tubes on the 1-2A EDG on July 21, 2008. Licensee inspections discovered two tubes which were leaking near the tube sheet of the lube oil HTEX. The licensee inspected the 1B EDG lube oil HTEX while the EDG was out of service and discovered two tubes with greater than desired through wall erosion (99% and 56%). The faulty tubes on both HTEXs were also plugged. The licensee performed eddy current and pressure testing of both HTEXs prior to returning the EDGs to service. The licensee plans to inspect 2B EDG at the next available equipment outage.

**4160 Volt Breakers:** A 95001 was conducted for the initial (2006) Allis-Chalmer breaker issues which resulted in the opening of a Parallel White Performance Indicator Finding. Significant weakness in the licensee's thoroughness of evaluations were discovered during this inspection. Licensee made decision to replace original Allis breaker with Cutler-hammer, retaining the original breaker cubicles. An AIT was conducted for the September 2007 for additional CCW breaker failures. A CAL was issued in November 2007 regarding the continuing Cutler-hammer breaker problems. The CAL was inspected and closed in January 2008. Since CAL closure, and incorporation of licensee's multi-point inspection no major problems have been noted.

**RHR/CS SUMP Pump Suction Isolation Valve Encapsulation:** The licensee discovered water in five vertical pipe chases containing the sump suction piping of these systems including the 1B containment spray pipe chase containing approximately 500 gallons of water. The licensee is draining the valve encapsulations on a weekly basis and the vertical pipe chases on a monthly basis as a compensatory measure. The licensee is considering removal of the encapsulations as a long term solution. Open URI remains.