Power Reactor Event # 46375

Site: OCONEE		**Notification Date / Time:** 10/29/2010 09:39 (EDT)	
Unit: 1 2 3 **Region:** 2 **State :** SC		**Event Date / Time:** 10/28/2010 12:40 (EDT)	
Reactor Type: [1] B&W-L-LP,[2] B&W-L-LP,[3] B&W-L-LP		**Last Modification:** 10/29/2010	
Containment Type: DRY AMB DRY AMB DRY AMB			
NRC Notified by: SANDRA SEVERANCE		**Notifications:** REBECCA NEASE	R2DO
HQ Ops Officer: BILL HUFFMAN		PT 21 GROUP E-MAIL	
Emergency Class: NON EMERGENCY			
10 CFR Section:			
21.21	UNSPECIFIED PARAGRAPH		

Unit	Scram Code	RX Crit	Init Power	Initial RX Mode	Curr Power	Current RX Mode
1	N	Yes	100	Power Operation	100	Power Operation
2	N	Yes	100	Power Operation	100	Power Operation
3	N	No	0	Refueling	0	Refueling

DEFECT DISCOVERED IN TUBE STEEL THAT COULD BE USED IN VARIOUS SAFETY RELATED STRUCTUAL APPLICATIONS

"On October 28, 2010, Duke Energy completed a reportability determination which concluded that a defect associated with four inch by four inch tube steel with one-half inch wall thickness is reportable under Part 21. The tube steel was procured safety-related from Mackson, Inc. on May 26, 2010. Receipt of the material occurred on June 14, 2010. During construction of the Protected Service Water (PSW) ductbank elevated cable raceway, Craft reported a longitudinal crack in the tube steel, approximately four feet in length, adjacent to a raceway fabrication weld. The crack was located in the manufacturer's longitudinal seam weld in the tube steel. Follow-up investigation and laboratory evaluation revealed that the structural steel tubing in question contains surface breaking flaws located along the centerline of the seam weld which are attributable to lack of fusion that occurred during tubing manufacture. Additional testing of samples from the same heat of material indicated that the seam weld flaw depth varied with some localized areas reaching depths of at least 40 percent through the wall thickness prior to raceway fabrication welding. According to documents received from the supplier, during dedication, the supplier performed chemical, physical and 100 percent visual exam in accordance with their accepted dedication procedures for ASTM A500 for Grade B material. However, the supplied product did not conform to the requirements of ASTM A500 in that the longitudinal butt joint was not welded across its thickness (Reference ASTM A500, Section 6.2). Duke Energy will provide follow-up written notification within 30 days pursuant to Part 21.21(d)(3)(ii).

"Initial Safety Significance: None. The defective tube steel utilized in the PSW structure was not placed into service. Tube steel sections of the same heat of material not used in pre-fabrication efforts were scrapped. Those installed were cut out or evaluated for acceptability by Engineering. The failure of this weld significantly impairs the structural properties of the hollow structural section. The generic implications associated with the potential to use these structural members in various nuclear safety-related applications at this site and at other stations results in a substantial safety hazard were it to remain uncorrected.

IE19
NRR

Power Reactor Event # 46375

"Corrective Action(s):
1. Notified supplier, Mackson, Inc.
2. Re-worked all uses of the defective structural tube steel.
3. Developed additional, required testing for safety -related tube steel."

The supplier (Mackson, Inc) indicated to Oconee that no other nuclear power plants have received this type of tube steel from Mackson. Oconee also has concluded that the condition is confined to only one heat of the tubing used onsite. All the tube steel of this heat has been either disposed of, removed, or verified acceptable.

The licensee has notified the NRC Resident Inspector.

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Attachment B **OMP 1-14**

NRC Event Notification Worksheet Page 1 of 2

NRC Event Notification Worksheet				
Notification Time	**Facility or Organization**	**Unit**	**Caller's Name**	**Call Back #**
	Oconee Nuclear Station	1, 2, 3	Sandra Severance	ENS 256-9931 (864) 873- 3466

NRC Operations Officer Contacted:	NRC Event Number:

Event Time/Zone	Event Date	Power/Mode Before	Power/Mode After
1240 EST	10/28/2010	N/A	N/A

Event Classifications

- ☐ General Emergency
- ☐ Site Area Emergency
- ☐ Alert
- ☐ Unusual Event
- ☐ 50.72 Non-emergency (see other columns)
- ☐ 72.75 Spent Fuel (ISFSI)
- ☐ 73.71 Physical Security
- ☐ Transportation
- ☐ 20.2202 Material/Exposure
- ☐ 26.73 Fitness for Duty
- ☒ Other: Part 21.21(d)(3)(i)

1-Hour Non-emergency 10 CFR 50.72 (b)(1)

- ☐ Deviation from TS per 50.54(x)

4-Hour Non-Emergency 10 CFR 50.72 (b)(2)

- ☐ (i) TS Required Shutdown
- ☐ (iv) (A) ECCS Discharge into RCS
- ☐ (iv) (B) RPS Actuation (while critical)
- ☐ (xi) News release/notification to other government agencies

8-Hour Non-Emergency 10 CFR 50.72 (b) (3)

- ☐ (ii) (A) Degraded Condition
- ☐ (ii) (B) Unanalyzed Condition
- ☐ (xiii) Loss of emergency assessment capability/offsite communications
- ☐ (iv) (A) System Actuation
  - ☐ RPS
  - ☐ Containment isolation
  - ☐ ECCS
  - ☐ EFW
  - ☐ Containment spray/coolers
  - ☐ Emergency AC (Keowee Hydro)
- ☐ (v) (A) Safe Shutdown Capability
- ☐ (v) (B) Residual Heat Removal Capability
- ☐ (v) (C) Control of radiological material
- ☐ (v) (D) Accident Mitigation
- ☐ (xii) Transport contaminated person to offsite medical facility

Event Description

(Include systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc.)

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NRC Event Notification Worksheet

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Corrective Action(s):
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3. Developed additional, required testing for safety-related tube steel.

Anything unusual or not understood?	☐ Yes (Explain above)	☒ No
Did all systems function as required?	☒ Yes	☐ No (Explain above)
Mode of operations until corrected: N/A	Estimated restart date: N/A	

Does event result in a radiological release, RCS leak, or steam generator tube leak?	☐ Yes (complete page 3)	☒ No

Does the event result in any of the units experiencing a transient?	☐ Yes (complete Oconee Plant Status sheet)	☒ No

Notifications

NRC Resident: Andy Sebrosch	(Y)/N/will be	Plant Manager: Scott Batson	(Y)/N/will be
Notified By: SN Severance	Time: 0910 / 10/29/10	Notified By: SN Severance	Time: 0915 10/29/10
State(s):	Y/(N)/will be	Operations Superintendent: [illegible]	(Y)/N/will be
Notified By:	Time:	Notified By: SN Severance	Time: 0924 10/29/10
Local:	Y/(N)/will be	Other Government Agencies:	Y/(N)/will be
Notified By:	Time:	Notified By:	Time:
Media/Press Release:	Y/(N)/will be	Other:	Y/(N)/will be
Notified By:	Time	Notified By	Time

Operations Shift Manager/Emergency Coordinator Approval:	Date/Time:
[signature]	10-29-10 0938

NRC Notification Complete by Caller/NRC Communicator:	Date/Time: