

**ICE CONDENSER ISSUES**

Wednesday, January 27, 1999

ID	FACILITY	ISSUE	SOURCE	REF DOC	ALLEGATION Y/N	ACTION PENDING
1	WATTS BAR	THERE WERE WHOLE AND BROKEN SCREWS FOUND IN THE WATTS BAR ICE MELT TANK IMPLYING DEFECTIVE SCREWS, IMPROPER INSTALLATION, OR DESIGN OF ICE BASKETS . The ALLEGER found in an ice melt tank a number of whole and broken screws that are used to fasten the segments of the ice condenser ice baskets together.	OVERALL	DOL, Pg 18-21	YES NRR-1998-A-0011	RII - Complete, except for any review after issue "5" completion. Reviewed TVA PER WBPER950246 for adequacy, based on new information.
<b>RESOLUTION</b>						
2	WATTS BAR & WESTINGHOUSE	THE RESULTS OF NEITHER THE 6/2/95 NOR THE 6/19/95 ICE CONDENSER SCREW TVA CENTRAL LABORATORY REPORT WERE "OFFICIALLY" SENT TO WESTINGHOUSE, AS REQUIRED BY THE CORRECTIVE ACTION STEPS IN PER 246. The ALLEGER contends that TVA took actions to remove the resolution of the PER from ALLEGER, had Westinghouse write a report to conclude there was no safety problem, and closed the PER without ever doing inspections to positively visually verify if there are missing or broken screws in service. The ALLEGER alleges by implication that the PER was improperly closed without a sound technical basis.	OVERALL	DOL, Pg 18-21	YES NRR-1998-A-0011	RII - Complete and substantiated. Only report sent was the 6/2/95 report which was sent unofficially. AER to be written after issue "1" completed.
<b>RESOLUTION</b>						

*Received 1-27-99  
From C. Dameras  
AC Region II  
BTR*

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3	MCGUIRE	DEFECTIVE SCREWS WERE FOUND IN THE MELT SYSTEM THAT WERE NOT REPORTED TO MANAGEMENT. A Duke peer stated that they have encountered up to hundreds of screws in their melt system but did not raise the issue to management because the plants were operating at the time.	OVERALL	DOL, Pg.104-106	YES NRR-1998-A-0011	RII - Complete - Region II recommended including the following paragraph in a letter to Mr. Overall or to UCS as his authorized agent, and not enclose any AER:

**RESOLUTION**

On December 16, 1996, you informed the NRC that Duke Power had informed you that the two sites, McGuire and Catawba "find broken screws regularly during outages". In a letter to you dated May 16, 1997, from William E. Holland, Subject: RII-96-A-0249, Integrity of Ice Condenser, the NRC indicated that the McGuire and Catawba ice condenser lead engineer stated that "technicians have never found loose or broken coupling ring screws on the floor of the ice condenser since the plant went into commercial service." We also enclosed NRC Inspection Report 50-369,370/97-04, which also discussed this issue for McGuire. This statement from the licensee implied to us, and therefore to you, that the licensee had not found any broken or whole screws, which had fallen from the ice baskets, either on the ice condenser floor or in the ice-melt tank. Subsequent to this 1997 inspection, an outage-related inspection was conducted at McGuire in June-August 1998, and documented in NRC Inspection Report 50-369,370/98-11. Section M1.3 of this report documents that during this inspection, several broken and whole screws were observed on the ice condenser floor and in the ice-melt tank, seemingly contradicting the previous NRC findings in Report 97-04. The inspector questioned this apparent discrepancy and discussed the issue with the licensee for both the McGuire and Catawba sites. This review determined that the statement in Report 97-04 was characterized incorrectly by us. As discussed in Report 98-11, the licensee has routinely found broken and whole screws on the ice condenser floor and in the ice melt tank during outages, primarily as the result of ice basket servicing and repair. We determined that the licensee's statement of "never found loose or broken coupling ring screws" actually referred to the licensee having never found missing or broken screws during the visual inspection of the basket interiors using a camera,

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		an inspection conducted every refueling outage.				
4	D.C. COOK	AN ICE BASKET WAS PULLED APART AS A RESULT OF MISSING AND DEFECTIVE SCREWS. AEP had pulled a basket apart during ice weighing, and AEP at times had to use nuts and bolts instead of screws to hold some of their baskets together.	OVERALL	DOL, Pg 104 -106	YES NRR-1998-A-0011	RII and NRR action pending.
		<b>RESOLUTION</b>				
5	WATTS BAR & WESTINGHOUSE	POTENTIAL DEFECTS IDENTIFIED IN WAREHOUSE SCREWS AND DOCUMENTED IN THE 6/2/95 TVA CENTRAL LABORATORY REPORT WERE NOT LISTED OR EVALUATED IN THE 6/19/95 REPORT. The ALLEGER later alleges (Pg 134-140) that this report was retracted, copies confiscated, and a replacement report issued that does not contain all the information of the first report and does not reach the same conclusions. The ALLEGER alleges that the first version of the report shows that the new unused screws contain cracks, implying a generic defect.	OVERALL	DOL, Pg 134-140, DOL, Pg 470-476	YES NRR-1998-A-0011 RII-1997-A-0148	RII - Complete, except for any review after OI investigation. 8/31 inspection identified TVA position that warehouse screw info removed because defect identical to in-service screws and not want duplication. TVA provided basis of report change to NRC and reevaluated PER. Basis reviewed during 10/26 inspection. OI to investigate and complete by 3/99.
		<b>RESOLUTION</b>				
6	WATTS BAR	THE FIRST VERSION OF THE METTALURGICAL REPORT SHOWS THAT NEW UNUSED SCREWS CONTAIN CRACKS, IMPLYING A GENERIC DEFECT. The allegor alleges tha tthe fist version of the report shows that the new unused screws contain cracks, implying a generic defect.	OVERALL	DOL,PG 470-476	YES NRR-1998-A-0011	RII
		<b>RESOLUTION</b>				

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7	WATTS BAR	THE FIRST VERSION OF THE REPORT WAS RETRACTED, COPIES CONFISCATED, AND A REPLACEMENT REPORT ISSUED EXCLUDING DATA FROM THE FIRST REPORT. The ALLEGER later alleges (Pg 134-140) that this report was retracted, copies confiscated, and a replacement report issued that does not contain all the information of the first report and does not reach the same conclusions.	OVERALL	DOL, Pg 134-140	YES NRR-1998-A-0011 Rll-1998-A-0144	Rll - OI investigation pending (2-1998-023)
<b>RESOLUTION</b>						
8	SEQUOYAH	A SEQUOYAH SUPERVISOR REFUSED TO RELEASE SCREWS TO THE ALLEGER BECAUSE IT MIGHT CAUSE THE SEQUOYAH PLANT TO BE SHUT DOWN. The ALLEGER alleges that the supervisor refused to release the screws because it might cause the Sequoyah plant to be shut down.	OVERALL	DOL, Pg 127-129	YES NRR-1998-A-0011	Rll - Complete and substantiated, but no safety issue. WB system engineer wanted screws like 1995 WB. SEQ had only "new" 1988 screws in warehouse. "Old" screws like WB were in-service and SEQ would not remove screws for WB system engineer. AER to be written by 11/30
<b>RESOLUTION</b>						
9	WATTS BAR	A TVA MANAGER SAID IN 1995 THAT THERE SHOULD BE NO MORE PERS, SRS, DCNs, ETC., WRITTEN UNLESS THEY ARE WORK CRITICAL TO ACHIEVING FUEL LOAD. The ALLEGER alleges that some member of management said there should be no more PERs, WRs, DCNs, etc. written unless they are work critical to achieving fuel load.	OVERALL	DOL, Pg 173-179	YES NRR-1998-A-0011	Rll - provide AER and determine if ALLEGER provided any names of Managers and if Rll talked to them. 7/27/98 ARB BRIEFING SHEET. Region II response of 6/22/98 appears reasonable. In 7/23/98 discussions, region II further emphasized that this matter had been thoroughly considered by region II and region II sees no need for further action. NRR identified no reason to disagree with region II's views.
<b>RESOLUTION</b>						

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ID	FACILITY	ISSUE	SOURCE	REF DOC	ALLEGATION Y/N	ACTION PENDING
10.1	WATTS BAR	TVA ALLEGEDLY KNEW OF PROBLEMS WITH ICE CONDENSER DOORS, BASKETS OR SCREWS THAT MET NRC REPORTABILITY REQUIREMENTS AND DID NOT REPORT THESE PROBLEMS TO THE NRC. Koehl is questioned on the PER process, the criteria for escalation to a SCAR, and reportability to the NRC.	OVERALL LOCHBAUM	Pg 680-681 (DOL), UCS 1/12/98	YES NRR-1998-A-0011	RII - Complete except for PER-246. Reviewed PERs for reportability for ice condenser doors, baskets and screws. Currently not substantiated. Waiting for issue "1" completion so region II can complete review of PER-246 reportability.

RESOLUTION

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ID	FACILITY	ISSUE	SOURCE	REF DOC	ALLEGATION Y/N	ACTION PENDING
10.2	MCGUIRE	CONTAINMENT ICE CONDENSER PROBLEMS [CONFIGURATION AND TESTING, BAY DOORS AND ICE BASKETS] WERE KNOWN BUT NOT PROPERLY REPORTED BY WESTINGHOUSE OR AFFECTED LICENSEES	OVERALL LOCHBAUM	1/12/98 UCS LTR	YES NRR-1998-A-0011	Rll - Completed review for reportability for Ice Condenser doors, baskets and screws completed and not substantiated. No further action required.
<b>RESOLUTION</b>		<p>Through discussions, observations and review of records, the inspector was able to verify that the licensee had an effective program in place to document and evaluated issues for reportability. Section E1.1 of NRC Inspection Report 50-369, 370/98-11 discusses this review. The Problem Investigation Process (PIP) process is used by the licensee to document what is "known" by the site. Part of this process is to evaluate the findings for reportability against 10 CFR 50.73 (operability problems) and 10 CFR 21(material problems), the two reportability areas where ice condenser problems would be captured at McGuire. The inspector reviewed all the PIPs from 1988 to the present involving baskets, doors and screws. Several of these PIPs did result in licensee event reports submitted to the NRC under 10 CFR 50.73. The inspector's review did not identify any other PIPs that met the threshold for NRC reporting.</p> <p>CONCLUSION:</p> <p>Based on the information provided, we did not substantiate the allegation because the NRC review did not identify any "known" issues identified in the PIP process that should have been reported to the NRC, and were not.</p>				
10.3	WESTINGHOUSE	TVA ALLEGEDLY KNEW OF PROBLEMS WITH ICE CONDENSER DOORS, BASKETS OR SCREWS THAT MET NRC REPORTABILITY REQUIREMENTS AND DID NOT REPORT THESE PROBLEMS TO THE NRC. Koehl is questioned on the PER process, the criteria for escalation to a SCAR, and reportability to the NRC.	OVERALL LOCHBAUM	Pg 680-681 (DOL) UCS 1/12/98 LTR	YES NRR-1998-A-0011	NRR
<b>RESOLUTION</b>						

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10.4	D.C. COOK	TVA ALLEGEDLY KNEW OF PROBLEMS WITH ICE CONDENSER DOORS, BASKETS OR SCREWS THAT MET NRC REPORTABILITY REQUIREMENTS AND DID NOT REPORT THESE PROBLEMS TO THE NRC. Koehl is questioned on the PER process, the criteria for escalation to a SCAR, and reportability to the NRC.	OVERALL LOCHBAUM	Pg 680-681 (DOL) UCS 1/12/98 LTR	NO 2.206	NRR - 2.206 EVALUATION PENDING
<b>RESOLUTION</b>						
11	SEQUOYAH	FOR UNKNOWN REASON, SEQUOYAH SWITCHED SCREW SUPPLIERS IN 1998 IMPLYING THEY WERE AWARE OF DEFECTIVE SCREWS. The allegor also states on page 406 that Sequoyah does not use Westinghouse provided screws, but since 1988 has used "qualified replacement screws from an alternate vendor". This was a surprise to ALLEGER when he first read it, and he questions the motive for Sequoyah switching to another supplier.	OVERALL	DOL, Pg 403-408	YES NRR-1998-A-0011	RII - Complete and not substantiated. Ice condenser basket screw supplier switched in 1988 because screws were needed and could purchased commercial cheaper and than QA dedicate. AER to be written by 12/15.
<b>RESOLUTION</b>						

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12	WATTS BAR	TVA CENTRAL LABORATORY STAFF WERE NOT QUALIFIED TO MAKE DECISIONS ON FAILURE MODES; AND THAT LAB MAY NOT MEET QA STANDARDS FOR HANDLING SAFETY-RELATED EVALUATIONS ["OTHER ISSUE" FROM 6/27/98 MATRIX]	OVERALL	["OTHER ISSUE" FROM 6/27/98 MATRIX]	YES NRR-1998-A-0011 RII-1997-A-0148 RII-1996-A-0249	RII - Completed review of need to inspect Lab. Decision was to review. Review completed (2) and not substantiated. Reviewed TVA audits of process and personnel new info from TVA on (1). Final review completed during 10/26/98 inspection. AER to be written after OI review and completion of issue "1." NOTE: concern 1 was an OVERALL allegation in RII-1997-A-0148, originally sent to teh alleger on 11/25/97 as not an allegation. Joint ARB decided issue was an allegation and added concern 2 as the implied concern.
<b>RESOLUTION</b>						
13	WATTS BAR	COMMON-USE SHEET-METAL SCREWS USED THROUGHOUT THE PLANT ARE USED ON THE ICE CONDENSER, IN PLACE OF VENDOR-APPROVED BASKET COUPLING SCREWS.	LOCHBAUM HARRIS	LOCHBAUM & HARRIS MEETING 5/26/1998	YES NRR-1998-A-0011	RII - Complete and not substantiated. AER to be written by 11/30.
<b>RESOLUTION</b>						
14	WATTS BAR	THE ICE CONDENSER FLOOR COULD HEAVE DUE TO WATER ACCUMULATION BELOW THE CONCRETE FLOOR	LOCHBAUM	1/12/98 UCS LTR 1/23/98 UCS CALL	YES NRR-1998-A-0011	RII - Complete and not substantiated. AER to be written by 11/30.
<b>RESOLUTION</b>						
15	WATTS BAR	EXCESSIVE MOISTURE (FROST) ACCUMULATION COULD OCCUR ON THE HINGES ON THE ICE CONDENSER BAY DOORS THAT RESTRICT THE DOORS FROM OPENING	LOCHBAUM	1/12/98 UCS LTR 1/23/98 UCS CALL	YES NRR-1998-A-0011	RII - Complete and not substantiated. AER to be written by 11/30.
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16	WATTS BAR	THE ICE CONDENSER SYSTEM HAS SIMILAR PROBLEMS TO THOSE IDENTIFIED AT DC COOK, AS DOCUMENTED IN NRC IR 50-315/316-980005	LOCHBAUM	1/12/98 UCS LTR 1/23/98 UCS CALL	YES NRR-1998-A-0011	RII - Complete inspection during spring 1999 refueling outage.
RESOLUTION						