

RI - DNMS Licensee Event Report Disposition

Licensee: TVA

Event Description: Stuck Shutter

License No: 16-25243-01

Docket No:

0303312

MLER-RI:

2011-014

Event Date:

07/12/11

Report Date:

07/13/11

HQ Ops Event #:

1. REPORTING REQUIREMENT

- ☐ 10 CFR 20.1906 Package Contamination
☐ 10 CFR 20.2201 Theft or Loss
☐ 10 CFR 20.2203 30 Day Report
☐ Other

- ☒ 10 CFR 30.50 Report
☐ 10 CFR 35.3045 Medical Event
☐ License Condition

2. REGION I RESPONSE

- ☐ Immediate Site Inspection
☐ Special Inspection
☐ Telephone Inquiry
☐ Preliminary Notification/Report
☒ Information Entered in RI Log
☐ Report Referred To:

Inspector/Date

Inspector/Date

Inspector/Date

Daily Report

Review at Next Inspection

3. REPORT EVALUATION

- ☒ Description of Event
☒ Levels of RAM Involved
☐ Cause of Event

- ☒ Corrective Actions
☐ Calculations Adequate
☐ Additional Information Requested from Licensee

4. MANAGEMENT DIRECTIVE 8.3 EVALUATION

- ☐ Release w/Exposure > Limits
☐ Repeated Inadequate Control
☐ Exposure 5x Limits
☐ Potential Fatality

- ☐ Deliberate Misuse w/Exposure > Limits
☐ Pkging Failure > 10 rads/hr or Contamination > 1000x Limits
☐ Large# Indivs w/Exp > Limits or Medical Deterministic Effects
☐ Unique Circumstances or Safeguards Concerns

If any of the above are involved:

☐ Considered Need for IIT

☐ Considered Need for AIT

Decision/Made By/Date:

5. MANAGEMENT DIRECTIVE 8.10 EVALUATION (additional evaluation for medical events only)

- ☐ Timeliness - Inspection Meets Requirements (5 days for overdose / 10 days for underdose)
☐ Medical Consultant Used-Name of Consultant/Date of Report: _____
☐ Medical Consultant Determined Event Directly Contributed to Fatality
☐ Device Failure with Possible Adverse Generic Implications
☐ HQ or Contractor Support Required to Evaluate Consequences

6. SPECIAL INSTRUCTIONS OR COMMENTS

Place in docket file. Review on next scheduled inspection.

☐ Non-Public

Inspector Signature: [Signature]

Date: 8/17/11

☒ Public-SUNSI REVIEW COMPLETE

Branch Chief Initials: R.C. Ref-on

Date: 8/17/2011

TOP

Power Reactor
 Facility: SEQUOYAH
 Region: 2 State: TN
 Unit: [1] [2] []
 RX Type: [1] W-4-LP,[2] W-4-LP
 NRC Notified By: MATT LEENERTS
 HQ OPS Officer: CHARLES TEAL
 Emergency Class: NON EMERGENCY
 10 CFR Section:
 50.72(b)(2)(xi) - OFFSITE NOTIFICATION

Event Number: 47045
 Notification Date: 07/13/2011
 Notification Time: 01:08 [ET]
 Event Date: 07/13/2011
 Event Time: 00:23 [EDT]
 Last Update Date: 07/13/2011

Person (Organization):
 SCOTT FREEMAN (R2DO)

Unit	SCRAM	Code	RX	CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
1	N		Y		100	Power Operation	85	Power Operation
2	N		Y		100	Power Operation	85	Power Operation

Event Text

OVERFLOW OF CONDENSER CIRCULATING WATER

"At 0023 on 07/13/2011, a notification to an outside state agency, Tennessee Department of Environment and Conservation (TDEC), was made due to an overflow of Condenser Circulating Water from the northwest corner of the diffuser pond through a heavily vegetated area into a slough adjacent to the Sequoyah Training Center. Condenser Circulating Water is also discharging to the river via storm water outfall 14 near the cooling towers as well as the normal diffuser pond discharge at outfall 101.

"At approximately 1545 on 07/12/2011, one of the two diffuser gates at Sequoyah failed and shut off the west diffuser pipe. The other diffuser remained open throughout the event. Plant personnel made several attempts to raise the diffuser gate utilizing divers and cranes. When it was determined the crane could not lift the diffuser gate, both units reduced power to 85% and one (1) Condenser Circulating Water pump for each unit, two (2) pumps total, were removed from service. Diffuser pond level is currently lowering."

The NRC Resident Inspector has been informed.

TOP

Non-Agreement State
 Rep Org: PARADISE FOSSIL PLANT
 Licensee: TENNESSEE VALLEY AUTHORITY
 Region: 1
 City: DRAKESBORO State: KY
 County:
 License #: 16-25243-01
 Agreement: Y
 Docket: 030-3312
 NRC Notified By: KEVIN CASEY
 HQ OPS Officer: JOHN SHOEMAKER
 Emergency Class: NON EMERGENCY
 10 CFR Section:
 30.50(b)(2) - SAFETY EQUIPMENT FAILURE

Event Number: 47046
 Notification Date: 07/13/2011
 Notification Time: 14:25 [ET]
 Event Date: 07/12/2011
 Event Time: 13:30 [CDT]
 Last Update Date: 07/13/2011

Person (Organization):
 JAMES DWYER (R1DO)
 SCOTT FREEMAN (R2DO)
 ROBERT LEWIS (FSME)

Event Text

MOISTURE DENSITY GAUGE SHUTTER STUCK IN THE CLOSED POSITION

Tennessee Valley Authority Paradise Fossil Plant uses an Ohmart Model SR1-A density gauge with a sealed source containing up to 1,562 milliCuries of Cesium 137. The gauge is used to monitor the density of the limestone slurry at the Unit 2 scrubber. On July 12, 2011 at 1330 (CDT) the shutter on the density gauge was determined to be not operable. It was determined that the shutter failed in the closed position when the operator received a slurry density high alarm.

The shutter failure is in the closed and safe position. The gauge has been entered into the corrective action program and will be repaired by the manufacturer at a later time. There were no personnel exposures, no damages to other equipment, and no additional compensatory actions necessary since the shutter is failed closed/safe position.

The licensee notified the R2DO (Freeman).

 TOP

Fuel Cycle Facility	Event Number: 47047
Facility: GLOBAL NUCLEAR FUEL - AMERICAS	Notification Date: 07/13/2011
RX Type: URANIUM FUEL FABRICATION	Notification Time: 17:12 [ET]
Comments: LEU CONVERSION (UF6 TO UO2)	Event Date: 07/12/2011
LEU FABRICATION	Event Time: 17:30 [EDT]
LWR COMMERCIAL FUEL	Last Update Date: 07/13/2011

Region: 2

City: WILMINGTON State: NC

County: NEW HANOVER

License #: SNM-1097

Agreement: Y

Docket: 07001113

NRC Notified By: PHILLIP OLLIS

HQ OPS Officer: JOE O'HARA

Emergency Class: NON EMERGENCY

10 CFR Section:

70.50(b)(2) - SAFETY EQUIPMENT FAILURE

Person (Organization):

SCOTT FREEMAN (R2DO)

MERAJ RAHIMI (NMSS)

Event Text

INAUDIBLE CRITICALITY WARNING SIREN

"At approximately 1730 on 7/12/2011, a regularly scheduled test of the inside Criticality Warning System (CWS) covering the Fuel Manufacturing Operation (FMO) was conducted. It was discovered that a CWS warning horn in the ChemMet lab was determined to be inaudible. Compensatory measures were immediately implemented. All other horns of the inside CWS in all other areas were functional and clearly audible. The affected area will remain shut down pending an investigation and implementation of additional corrective actions. The event is being reported within 24 hours pursuant to 10CFR70.50(b)(2) as a safety equipment failure. A CWS warning horn in the ChemMet lab was determined to be inaudible. All other CWS warning horns operating correctly. Investigation results pending. Affected area access was restricted. The faulty CWS horn has been replaced and tested."

The licensee notified Region 2(Covert) and will notify the state radiation protection agency and New Hanover Emergency Management.

Page Last Reviewed/Updated Thursday, July 14, 2011

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Tennessee Valley Authority
1101 Market Street, LP 3R
Chattanooga, Tennessee 37402-2801

R. M. Krich
Vice President
Nuclear Licensing

August 12, 2011

10 CFR 30.50(c)(2)

ATTN: Document Control Desk,
Director, Office of Federal and State Materials
and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Material License No. 16-25243-01
NRC Docket No. 030-33122

Subject: **Submittal of Report in Accordance with 10 CFR 30.50(c)(2) for
Material License No. 16-25243-01**

In accordance with 10 CFR 30.50(c)(2), the Tennessee Valley Authority (TVA) is submitting the following report regarding an event in which equipment failed to function as designed. This event was verbally reported to the Nuclear Regulatory Commission (NRC) on July 12, 2011 under Event Notification Number 47046. Enclosed is NRC Form 361A, used to document the initial notification. The failed equipment is licensed under Material License No. 16-25243-01 and used at TVA's Paradise Fossil Plant, located in Drakesboro, Kentucky.

Description of Incident

On July 12, 2011 at 1330 (CDT), plant staff determined that the shutter on the density gauge for the Unit 2 scrubber had failed in the closed position. Based on a high-high density alarm and normal recirculation pump amperage indication associated with the limestone slurry system, the control room operator requested the density gauge be investigated and repaired. The gauge, located on the Unit 2 scrubber, is used to monitor the limestone slurry being added to the scrubber. The Radiation Safety Officer (RSO) traveled to Paradise Fossil Plant on July 13, 2011 and determined the density gauge shutter had failed in the closed position. The density gauge is located outside in an area subject to spray from the limestone slurry, which is acidic. The RSO

RECEIVED
REGION 1

2011 AUG 16 AM 10:34

NRC FORM 361A
(8-2010)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSE NUMBER

**FUEL CYCLE AND MATERIALS
EVENT NOTIFICATION WORKSHEET**

16-25243-01

REPORT TIME 1425	FACILITY OR ORGANIZATION TVA - Paradise Fossil Plant	NAME OF CALLER Kevin Casey	CALL BACK TELEPHONE NO. (423) 751-8523
EVENT TIME 1330 CDT	EVENT DATE 07/12/2011	LOCATION OF EVENT (Include County and State) Paradise Fossil Plant, Drakesboro, Kentucky	PORTION OF PLANT AFFECTED Unit 2 Scrubber

EVENT CLASSIFICATIONS	EVENT TYPES	INCIDENT REPORTS (30.50, 40.60, 70.50)	
<input type="checkbox"/> GENERAL EMERGENCY *	<input type="checkbox"/> FUEL CYCLE	<input type="checkbox"/> 20.2201 LOSS / THEFT	<input type="checkbox"/> (a) PROTECTIVE ACTION PREVENTED
<input type="checkbox"/> SITE AREA EMERGENCY	<input type="checkbox"/> MEDICAL / ACADEMIC	<input type="checkbox"/> 20.2202 ACTUAL / THREATENED OVEREXPOSURE	<input type="checkbox"/> (b)(1) UNPLANNED CONTAMINATION
<input type="checkbox"/> ALERT	<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> 20.2202 ACTUAL / THREATENED RELEASE	<input checked="" type="checkbox"/> (b)(2) SAFETY EQUIPMENT FAILURE
<input type="checkbox"/> NOTIFICATION OF UNUSUAL EVENT *	<input type="checkbox"/> WASTE MANAGEMENT	<input type="checkbox"/> 21.21 DEFECT / NONCOMPLIANCE	<input type="checkbox"/> (b)(3) MEDICAL TREATMENT WITH CONTAMINATION
<input checked="" type="checkbox"/> INCIDENT REPORT	<input checked="" type="checkbox"/> INDUSTRIAL / COMMERCIAL	<input type="checkbox"/> 26.719 FITNESS FOR DUTY	<input type="checkbox"/> (b)(4) FIRE / EXPLOSION
<input type="checkbox"/> TRANSPORTATION EVENT	<input type="checkbox"/> FOREIGN EVENT	<input type="checkbox"/> 35.3045 MEDICAL EVENT	<input type="checkbox"/> 70.52 CRITICALITY / SNM LOST
<input type="checkbox"/> INFORMATION ONLY	<input type="checkbox"/> OTHER (Specify)	<input type="checkbox"/> 36.83 IRRADIATOR EVENT	<input type="checkbox"/> 70.52 ACTUAL / ATTEMPTED THEFT
<input type="checkbox"/> OTHER (Specify)		<input type="checkbox"/> 39.77 RUPTURED WELL LOGGING SOURCE	<input type="checkbox"/> CRITICALITY CONTROL 4-HOUR (BULLETIN 91-01)
		<input type="checkbox"/> 39.77 IRRETRIEVABLE WELL LOGGING SOURCE	<input type="checkbox"/> CRITICALITY CONTROL 24-HOUR (BULLETIN 91-01)
		<input type="checkbox"/> 40.26 TAILINGS / WASTE DAM FAILURE	<input type="checkbox"/> OTHER NON-CFR REQUIREMENT

* ONLY UNDER OLD 1981 ORDER

NOTIFICATIONS	YES	NO	WILL BE	ANYTHING UNUSUAL OR NOT UNDERSTOOD?	<input type="checkbox"/> YES (Explain below)
NRC REGION?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> NO
STATE?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DID ALL SYSTEMS FUNCTION AS REQUIRED?	<input checked="" type="checkbox"/> YES
LOCAL?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> NO (Explain below)
OTHER GOVERNMENT AGENCIES?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ADDITIONAL INFORMATION ON PAGE 2?	<input type="checkbox"/> YES
PRESS RELEASE?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/> NO

EVENT DESCRIPTION (Continue on Page 2 if necessary)

TVA's Paradise Fossil Plant uses an Ohmart Model SR-1A density gauge with a sealed source containing up to 1562 millicuries of Cesium-137. The gauge is used to monitor the density of the limestone slurry in the Paradise Fossil Plant Unit 2 scrubber. On July 12, 2011, at 1330 CDT, the shutter on the density gauge was determined to be not operable. The shutter failed in the closed position. The shutter failure discovery was made when the operators received a slurry density high alarm on July 12, 2011. The issue is being entered into the Corrective Action Program. No personnel radiation exposure was received. The source is shuttered and in a safe condition.

A twenty-four hour event notification is required per 10 CFR 30.50(b)(2) due to failure of the density gauge shutter.

Event Number - 47046

NRC Operations Officer - John Shoemaker

Fax Number 301-816-5151

Notified NRC Region II Duty Officer Scott Freeman

RADIOLOGICAL / CHEMICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS

ISOTOPE	ACTIVITY	PHYSICAL FORM	CHEMICAL FORM		STACK	LIQUID EFFLUENT	OTHER
				MONITOR READING			
				ALARM SETPOINT			

	PERSONNEL EXPOSURE / CONTAMINATION DATA	
ONGOING RELEASE	NUMBER OF PERSONNEL EXPOSED:	NUMBER OF PERSONNEL CONTAMINATED:
TERMINATED RELEASE	MAXIMUM EXTERNAL DOSE:	MAXIMUM EXTERNAL LEVEL:
OFFSITE RELEASE	MAXIMUM INTERNAL DOSE:	MAXIMUM INTERNAL LEVEL:
ON-SITE AREAS EVACUATED	CRITICAL ORGAN (if known):	CIRITIAL ORGAN (if known):
OFFSITE PROTECTIVE ACTION RECOMMENDED		

DEGRADED CRITICALITY SAFETY CONTROLS FOR ACCIDENT SCENARIO(S) (BULLETIN 91-01)

<input type="checkbox"/> ALL CONTROLS LOST	<input type="checkbox"/> ALL BUT SINGLE CONTROLS LOST	<input type="checkbox"/> DEFICIENT SAFETY ANALYSIS	<input type="checkbox"/> SAFETY SIGNIFICANCE UNKNOWN	<input type="checkbox"/> >45% MINIMUM CRITICAL MASS PRESENT OR READILY AVAILABLE
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NUMBER AND TYPES OF CONTROLS NECESSARY UNDER NORMAL OPERATING CONDITIONS

NUMBER AND TYPES OF CONTROLS WHICH FUNCTIONED PROPERLY UNDER UPSET CONDITIONS

NUMBER AND TYPES OF CONTROLS NECESSARY TO RESTORE A SAFE SITUATION

SAFETY SIGNIFICANCE OF EVENTS

SAFETY EQUIPMENT STATUS

STATUS OF CORRECTIVE ACTIONS

EVENT DESCRIPTION (Continued)