

**Attachment 9 to**

**GNRO-2012/00039**

**Entergy Nuclear Grand Gulf Nuclear Station License Renewal Environmental Audit  
– Hydrology Patton – Attachment L labeled  
“Reporting Documentation – Unit 2 Sumps”**

**Attachment L**

**Reporting Documentation – Unit 2 Sumps**

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NRC FORM 301 (12-2000)		<b>REACTOR PLANT EVENT NOTIFICATION WORKSHEET</b>		U.S. NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER EN # <b>4680Z</b>	
NRC OPERATION TELEPHONE NUMBER: PRIMARY - 301-816-5100 or 800-532-3469*, BACKUPS - [1st] 301-951-0550 or 800-449-3694*, [2nd] 301-415-0550 and [3rd] 301-415-0553 *Licensees who maintain their own ETS are provided these telephone numbers.					
NOTIFICATION TIME <b>1242 EDT</b>	FACILITY OR ORGANIZATION <b>Grand Gulf Nuclear Station</b>	UNIT <b>1</b>	NAME OF CALLER <b>Frank Weaver</b>	CALL BACK # <b>601-437-2374</b>	
EVENT TIME & ZONE <b>0852 COT</b>	EVENT DATE <b>4/29/11</b>	POWERMODE BEFORE <b>96% / MODE 1</b>		POWERMODE AFTER <b>96% / MODE 1</b>	
<b>EVENT CLASSIFICATIONS</b>		<b>1-Hr. Non-Emergency 10 CFR 50.72(b)(1)</b>		<b>(v)(A) Safe SID Capability ANA</b>	
GENERAL EMERGENCY GENA/EC	TS Deviation	AOEV		<b>(v)(B) RHR Capability ANB</b>	
SITE AREA EMERGENCY SITA/EC	<b>4-Hr. Non-Emergency 10 CFR 50.72(b)(2)</b>		<b>(v)(C) Control of Rad Release ANC</b>		
ALERT ALEA/EC	(i) TS Required SID	ASHJ		<b>(v)(D) Accident Mitigation AND</b>	
UNUSUAL EVENT UNUA/EC	(iv)(A) ECCS Discharge to RCS	AOCSS		<b>(x)(B) Offsite Medical AMED</b>	
<input checked="" type="checkbox"/> 50.72 NON-EMERGENCY (see next columns)	(iv)(B) RPS Actuation (scram)	APPS		<b>(x)(C) Loss Current/Alarm/Ramp ACCM</b>	
PHYSICAL SECURITY (73.71) CDD	<input checked="" type="checkbox"/> (c) Offsite Notification	APRE		<b>60-Day Optional 10 CFR 50.73(a)(1)</b>	
MATERIAL EXPOSURE ETT	<b>8-Hr. Non-Emergency 10 CFR 50.72(b)(3)</b>		Invalid/Specified System Actuation ANV		
FITNESS FOR DUTY FRT	(ii)(A) Degraded Condition	ACSD		<b>Other Unspecified Requirement (Identify)</b>	
OTHER UNSPECIFIED REQM. (see last column)	(ii)(B) Unanalyzed Condition	ALNA		NONR	
INFORMATION ONLY INF	(iv)(A) Specified System Actuation	AESF		NONR	

**DESCRIPTION**

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

On 4/28/2011 GGNS Unit 2 turbine building sump samples indicated tritium presence. The Unit 2 turbine building is an abandoned, partially constructed building. Follow-up review and investigation confirmed that water from unit 2 turbine building sump had been pumped to the environment through installed sump pumps and piping connected between the sumps and roof drains on the unit 2 turbine building. The release has been terminated by turning off the sump pumps located in the unit 2 turbine building. Site procedures require notification of off-site agencies, therefore the NRC is being notified in accordance with 10CFR50.72 (b)(2)(xi).

NOTIFICATIONS	YES	NO	WILL BE	ANYTHING UNUSUAL OR NOT UNDERSTOOD?	<input checked="" type="checkbox"/> YES (Explain above)	<input type="checkbox"/> NO
NRC RESIDENT	<input checked="" type="checkbox"/>					
STATE(s)			<input checked="" type="checkbox"/>	DID ALL SYSTEMS FUNCTION AS REQUIRED?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO (Explain above)
LOCAL		<input checked="" type="checkbox"/>				
OTHER GOV AGENCIES		<input checked="" type="checkbox"/>		MODE OF OPERATION UNTIL CORRECTED	<b>1</b>	ESTIMATED RESTART DATE: <b>N/A</b>
MEDIA/PRESS RELEASE		<input checked="" type="checkbox"/>				ADDITIONAL INFO ON BACK <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

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ADDITIONAL INFORMATION

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**RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS. (specific details/explanations should be covered in event description)**

<input type="checkbox"/> LIQUID RELEASE	<input type="checkbox"/> GASEOUS RELEASE	<input type="checkbox"/> UNPLANNED RELEASE	<input type="checkbox"/> PLANNED RELEASE	<input type="checkbox"/> ONGOING	<input type="checkbox"/> TERMINATED
<input type="checkbox"/> MONITORED	<input type="checkbox"/> UNMONITORED	<input type="checkbox"/> OFFSITE RELEASE	<input type="checkbox"/> T. S. EXCEEDED	<input type="checkbox"/> RM ALARMS	<input type="checkbox"/> AREAS EVACUATED
<input type="checkbox"/> PERSONNEL EXPOSED OR CONTAMINATED		<input type="checkbox"/> OFFSITE PROTECTIVE ACTIONS RECOMMENDED		*State release path in description	

	Release Rate (Ci/sec)	% T. S. LIMIT	HOOD GUIDE	Total Activity (Ci)	% T. S. LIMIT	HOOD GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium and dissolved noble gases)			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS					
ALARM SETPOINTS					
% T. S. LIMIT (if applicable)					

**RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS. (specific details/explanations should be covered in event description)**

LOCATION OF THE LEAK (e.g., SG #, valve, pipe, etc.)

LEAK RATE	UNITS: gpm/hr	T. S. LIMITS	SUDDEN OR LONG-TERM DEVELOPMENT
LEAK START DATE	TIME	COOLANT ACTIVITY AND UNITS:	PRIMARY SECONDARY

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL

EVENT DESCRIPTION (Continued from front)

N A

**§ 50.72(b)(2)(xi)**

"Any event or situation, related to the health and safety of the public or on-site personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made. Such an event may include an on-site fatality or inadvertent release of radioactively contaminated materials."

**Provide the following information to the NRC:**

- Estimate when the leak/spill started? (Give range of dates, or is it unknown?)
- Unknown
  - Date and time sample(s) confirmed a leak or spill (or discovery of contamination).
- 4/29/11, 08:52 confirmation of a path to storm drains. Sample was collected and confirmed on 4/28/11 18:45
  - Is the leak/spill/source known?
- Water sample was from U2 (unfinished construction, non-functioning unit) Turbine Bld Sump. This location is inside the Protected Area. Source unknown.
  - Is this an on-going leak or has the leak source been terminated?
- Leak was terminated on 4/28/11, prior to confirming water flow path to storm drain.
  - Radionuclide concentrations in spill/leak source or origin of the contamination.
- Origin is the U2 Turbine Bld Sumps, 87' elevation. 106,400 pCi/L Tritium in East sump, 100,259 pCi/L Tritium in West sump
  - Estimated leak rate?
- Unknown, temporary pump was in auto.
  - Has any radioactive material from this spill/leak/event reached the unrestricted area?

- These sumps pump to storm drains, which flow to Outfall 007 which is sampled monthly. There have been no Outfall 007 sample results that have met reportability thresholds in the last 2 years.
  - What is the estimated volume of plume and curie content of plume?
- N/A, this was a liquid flow path
  - Radionuclide concentrations in environmental soil and water samples.
- Outfall 007 Sample results December 16, 2010: 723 pCi/L Tritium (error: +/-186.09 pCi/L Tritium)
  - Does the spill/leak affect ground water, drinking water, or surface water? (Address each one).
- Currently there is no spill/leak so there is no effect on ground water, drinking water, or surface water
  - Could the spill/leak affect ground water, drinking water, or surface water or is the spill/leak likely to affect ground water, drinking water, or surface water?
- Outfall 007 discharges to the Mississippi River so ground water and drinking water could potentially be affected. Surface water will not be affected.
  - Are there monitoring wells down gradient? Activity in down gradient wells?
- Yes there are monitoring wells down gradient. They have tested positive for Tritium but results were below reportable levels. This information is being gathered.
  - List the distance from the spill/leak to the site boundary/unrestricted area (1) in direction of travel, and (2) nearest boundary.

Approximately 700 m (2) to nearest boundary, the direction of travel (1) is further.

- What is the rate of groundwater movement in the area (e.g., meters per year)?
- This information is being gathered.
  - Estimate of when contaminants will reach the site boundary/unrestricted area.

- The leak/spill has been terminated, so this would have potentially happened in the past.
  - Estimated contaminant concentrations at time when contaminants reach the site boundary. At very least, provide (bounding) estimate of future contaminant concentrations at site boundary relative to 10 CFR 50 Appendix I design objectives.

Highest result for a groundwater monitoring well sample was 11,600 pCi/l on March 2, 2011.

- Are the radionuclide concentrations expected to be below the 10 CFR 20 Appendix B, Table 2 values once the plume reaches the unrestricted area?

This information is being gathered but there have been no results above reportable limits.

- What is the calculated dose to a hypothetical member of the public at the source of the leak/spill if the affected water (ground, drinking, or surface) was a drinking water source. (Calculate this value even if the affected water is not a source of drinking water.) Use any valid method or use a conservatively bounding estimate (e.g., for tritium use the proportionality that 4 mrem annual is equivalent to 20,000 pCi/l annual average concentration.)

Unknown at this time. Based on the last sample of Outfall 007, the calculated dose would be 0.144mrem annual equivalent.

- What is the calculated dose to a hypothetical member of the public at the site boundary if the affected water (ground, drinking, or surface) at the site boundary was a drinking water source. (Calculate this value even if the affected water is not a source of drinking water.) Use any valid method or use a conservatively bounding estimate (e.g., for tritium use the proportionality that 4 mrem annual is equivalent to 20,000 pCi/l annual average concentration.)

Unknown at this time.

- Does the utility plan any remediation or cleanup activities at the current time?

Information is being gathered and a decision will be made.

Notifications made for H3.txt

From: Perino, Christina  
Sent: Friday, April 29, 2011 4:08 PM  
To: RICHEY, MARTY L; Perito, Michael; BROWNING, JEREMY G  
Cc: SCARBROUGH, RICHARD A; TRICHELL, WILLIAM T; EHRHARDT, KARL F; Ford, Bryan  
Subject: Notifications made for H3

Contacts made for NEI 07-07 industry ground water protection initiative, via EN-RP-113

Jimmy Carson at Mississippi State Dept of Radiological Health

Jimmy Crellin at MDEQ was not interested in the notification. He stated they did not deal in radiology and said MS State Dept of Rad Health was the right notification to make. He took my contact info and called me back. Said he didn't find anyone interested but we could send an email to the head of pollution control. I will follow up with him.

Gary uricchio at ANI

NEI email address per EN-RP-113: GW\_Notice@NEI.org

NRC 4 hour notification

All required notifications made within requirements

Christina

Sent from my iPad