

**Gepford, Heather**

---

**From:** George Kuzo *rk*  
**Sent:** Friday, January 11, 2008 9:16 AM  
**To:** Brian Bonser  
**Cc:** Heather Gepford  
**Subject:** Fwd: Groundwater protection initiative notifications  
**Attachments:** BFN CST overflow TPs.doc; NRC Tritium notification.doc

**Categories:** Groundwater

Brian,

As requested, we may want to ensure that they implement the communications protocol for meeting the NEI voluntary reporting to local and state authorities.

>>> Kenneth Clark 01/11/2008 9:03 AM >>>

>>> "Johnson, Terry W" <[twjohnson@tva.gov](mailto:twjohnson@tva.gov)> 01/10/2008 9:40 PM >>>

Attached are the talking points as well as the report submitted to the NRC regarding our overflowing incident at Browns Ferry. I don't know if we will be proactive with local media or not. Since there is no real public safety issues with this, we may wait and see if the reporters take an interest after seeing the NRC report posting Friday morning. If we get a call from one local reporter, we may initiate calls to the others who typically follow plant activities closely.

In addition to the officials notified as listed in the NRC report, Friday morning we intend to have our Valley Relations rep call the mayors of Athens and Decatur and the Limestone County Commission Chairman with a simple heads up.

When we talked to Spencer Black, we provided general information and didn't discuss all the numbers and details. We kept it simple and then asked if he had any questions. He asked if we declared an NOUE or other emergency and also wanted to know who else was notified. He also repeated his old complaint that the state EMA didn't inform him of the Unit 3 shutdown of New Years Eve. Sounds like an EMA organization problem to me.

Thanks,

Terry Johnson

Communications  
Tennessee Valley Authority  
423.751.6875  
423.843.7839

*5-101*

## Talking Points

### Unmonitored Release from Browns Ferry Condensate Storage Tank

January 10, 2008

- On Wednesday, water in an underground tunnel that overflowed from a storage tank at Browns Ferry was determined to contain radioactive tritium following analysis by chemists at TVA's lab in Muscle Shoals.
- The tank overflowed earlier this week when a level switch malfunctioned. The tank's overflow piping directed the water to a sump in the tunnel as designed. Due to the amount of overflow, the sump overflowed into the condensate pipe tunnel that is located under the turbine building.
- Due to the design of the tunnel, some contaminated water may have seeped from the tunnel into the ground.
- TVA notified state and local officials of the potential onsite underground leakage in accordance with an industry initiative that ensures communities are made aware of even minor incidents related to groundwater.
- The water sample obtained from the underground sample point located closest to the tunnel following the tank overflow showed no measurable tritium radioactivity. (Minimum measurable activity is 270 picocuries/liter)

#### Supplemental information

- TVA and the nuclear industry adopted an initiative (the Nuclear Energy Institute coordinated its development) to enhance groundwater protection around nuclear power plants.
- The industry's groundwater protection initiative ensures states and communities are promptly informed of even minor incidents that are not significant enough to be promptly reported to the NRC.
- TVA sites have long-standing programs to monitor for radioactivity for both off-site and on-site locations. These programs are subject to oversight by the Nuclear Regulatory Commission.

#### Q&A

- *Why can't you determine if contaminated water leaked underground or why do you think there is a spill to the ground?*

The tunnel is several hundred feet long and the expansion joints in it could leak. Data from the underground sample points used to monitor the groundwater have identified contamination in the area onsite under the plant from previous spills.

- *What are you doing to prevent this and fix the tunnel leaks?*  
Browns Ferry has been making arrangements to bring in specialty contractors to propose repair options and provide their cost estimates. Engineering work for the repair of the expansion joints was completed last year.  
Because the area is a controlled high radiation area not normally accessible for routine inspection, remotely monitored video cameras were installed to provide visual monitoring capabilities of the tunnel. In fact, the source of the water that caused the sump high level alarm was first identified using the installed video system.
- *How much water overflowed?*  
About 11,000 gallons of water overflowed into the sump and tunnel before it was discovered, stopped and pumped to the plant's radioactive wastewater system.
- *How much radioactivity was measured in the samples?*  
The initial measurement normally done on water samples showed no gamma radioactivity above the minimum detectable levels. Subsequent analysis by the offsite TVA laboratory showed about 2 million picocuries per liter. (a picocurie is 1/1,000,000,000,000 - one trillionth of a curie).  
Thus there was about 2 millionths of a curie per liter of radioactivity.

# # #

NRC EVENT NOTIFICATION WORKSHEET  
Page 1 of 2

NRC EVENT NOTIFICATION WORKSHEET				U.S. NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER EN # <u>43891</u>			
NOTIFICATION TIME 1508 EDT		FACILITY OR ORGANIZATION Browns Ferry Nuclear Plant		UNIT 1, 2, 3	CALLER'S NAME Michael D. Hunter		CALL BACK #: or ( 256 ) 729 - 2213
EVENT TIME & ZONE 1221 CDT		EVENT DATE 01/10/2008		<b>1-Hr Non-Emergency 10 CFR 50.72(b)(1)</b>		<b>8-Hr Non-Emergency 10 CFR 50.72(b)(3)</b>	
POWER/MODE BEFORE U1 & 2 Mode 1 U3 Mode 4		POWER/MODE AFTER Mode 1 Mode 4		TS Deviation ADEV		(ii)(A) Degraded Condition ADEG	
Event Classifications				<b>4-Hr Non-Emergency 10 CFR 50.72(b)(2)</b>		(ii)(B) Unanalyzed Condition AUNA	
General Emergency		Gen/AAEC		(i) TS Required S/D ASHU		(iv)(A) Specified System Actuation AESF	
Site Area Emergency		SIT/AAEC		(iv)(A) ECCS Discharge to RCS ACCS		(v)(A) Safe S/D Capability AINA	
Alert		ALE/AAEC		(iv)(B) RPS Actuation (scram) ARPS		(v)(B) RHR Capability AINB	
Unusual Event		UNU/AAEC		X (xi) Offsite Notification APRE		(v)(C) Control of Rad Release AINC	
X 50.72 Non-Emergency (see next columns)						(v)(D) Accident Mitigation AIND	
Physical Security (73.71)		DDDD				(xii) Offsite Medical AMED	
						(xiii) Lost Comm/Asmt/Resp ACOM	
Material/Exposure		B???				60-Day Optional 10 CFR 50.73(a)(1)	
Fitness For Duty		HFIT				Invalid Specified System Actuation AINV	
Other Unspecified Reqmt. (see last column)						Other Unspecified Requirement (Identify)	
Information Only		NINF					
DESCRIPTION							
<p>The licensee notified state and local authorities in accordance with the NEI voluntary reporting initiative to Alabama Radiological Protection Department Radiation Physicist – Environmental Section @ 1221 CDT, Alabama Department of Environmental Management Permit Writer Industrial Section, Water Division @ 1227 CDT, and Limestone County Emergency Management Department Director @ 1327 CDT:</p> <p>“This is a voluntary notification for a spill of water containing tritium as specified in section 2.2.a.iii, of Nuclear Energy Institute document NEI 07-07 entitled “Industry Groundwater Protection Initiative”. On January 5, 2008 at 13:55, Browns Ferry Nuclear (BFN) Plant operations personnel received a high water level alarm on a sump located within the plant, at the Condensate Piping Tunnel. The high water level was corrected within 3 hours of the alarm. Investigation into this condition, determined that the water came from an overflow of the Unit 3 Condensate Storage Tank into the tunnel as a result of failed tank level instrumentation. The water was immediately transferred to the plant radioactive waste system for processing. Laboratory analysis results received on January 9, 2008 indicated this water contained 2.2 E-03 µCi/ml tritium. Based on the tunnel construction, there is a potential for a small amount of this water to permeate into the ground. Subsequent to the spill, a sample obtained from the ground water sampling well adjacent to the tunnel showed no detectable level of tritium. BFN routinely monitors the ground water for radioactivity in accordance with the NEI Groundwater Protection Initiative. Tritium levels at BFN have never reached or exceeded the Environmental Protection Agency drinking water limit. This spill was contained within the plant structure and will not increase the dose to the public. As such, this event poses no threat to public health or safety.”</p> <p>The licensee notified the NRC Resident Inspector.</p> <p>This event is reportable as a 4 hour Non-Emergency Notification report in accordance with 10CFR50.72(b)(2)(xi) Any event or situation, related to the health and safety of the public or onsite 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.</p>							
NOTIFICATIONS		YES	NO	WILL BE	Anything Unusual or Not Understood?		Yes (Explain above)
NRC RESIDENT		X					No X
STATE(s)		X			Did All Systems Function As Required?		No
LOCAL		X			N/A		(Explain above)
Other Gov Agencies			X		Mode of Operation		Estimated
Media/Press Release			X		Until Corrected: Unit 1 & 2 Mode 1, Unit 3 Mode 4		Restart Date
							N
							A
							<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No