

March 5, 2010

MEMORANDUM TO: Bruce S. Mallett  
Deputy Executive Director  
for Reactor and Preparedness Programs  
Executive Director for Operations

Charles A. Casto  
Deputy Regional Administrator  
Region IV

FROM: R. W. Borchardt */RA/*  
Executive Director for Operations

SUBJECT: GROUNDWATER CONTAMINATION TASK FORCE

The purpose of this memorandum is to task the Deputy Executive Director for Reactor and Preparedness Programs (DEDR) to convene a team of U.S. Nuclear Regulatory (NRC) leaders and experts to reevaluate the recommendations made in the Liquid Radioactive Release Lessons Learned Task Force Final Report dated September 1, 2006, review the actions taken in SECY-09-0174 (Staff Progress in Evaluation of Buried Piping at Nuclear Reactor Facilities) (ML093160004), and review the actions taken in response to recent releases of tritium into groundwater by nuclear facilities. The team will be led by Charles A. Casto and will report day to day status to the DEDR. The purpose of the review is to determine whether the actions we have or that we plan to take in response to recent events and to the recommendations made in the 2006-Liquid Radioactive Release Lessons Learned Task Force Report (ML062650312) need to be augmented.

Recent incidents at Oyster Creek, Oconee, and Vermont Yankee with tritium contamination of groundwater wells and soil have caused NRC licensees and the NRC to take actions to address the source of the tritium (e.g., buried piping leaks) and to communicate the impact to the public and other external stakeholders. Each Regional Office has addressed the individual licensee actions; the Office of Nuclear Reactor Regulation has taken actions to address buried piping leaks; and the nuclear industry has undertaken additional initiatives to address buried piping leaks. While the actions in each individual case have been successful in identifying the source and seeing that the licensee corrects the problem, the incidents raise questions regarding the completeness of the NRC actions to date and whether those actions need to be augmented. Some actions are still being implemented as outlined in SECY-09-0174 on buried piping.

CONTACT: Steve L. Baggett, OEDO  
301-415-0534

The attached charter defines the objective, scope, expected product, schedule, staffing, and senior management interface. The scope of the task force effort should include, but not be limited to the following areas: industry experience; health impacts; the regulatory framework; NRC inspection; enforcement and reporting aspects; industry actions; international perspectives; and communications with external stakeholders.

Our current practice is to use a threshold when assessing licensee and NRC actions in response to unplanned and unmonitored release of radioactive material to groundwater incidents. The threshold we use for buried piping is discussed in detail in SECY-09-0174 and we also use the 10 CFR Part 20 release limits to determine acceptability of licensee and NRC response to groundwater events. Additionally, in conjunction with the NRC threshold, industry has implemented a Groundwater Protection Initiative to address detection and remediation of inadvertent releases that may have resulted in radioactive materials in the soil and groundwater. The Groundwater Contamination Task Force should review the current practice and assess whether a different threshold should be used for groundwater contamination incidents.

The task force will provide its observations, findings, and recommendations in the form of a written report consistent with the guidance provided in the charter. The task force activities should be complete and a written report provided to the Deputy Executive Director for Reactor and Preparedness Programs no later than May 15, 2010.

Enclosure:  
As stated

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BShearon, RES	HBell, OIG	EBrenner, OPA	SBurns, OGC
BSchmidt, OCA			

(list to be augmented once charter members are identified)

**ADAMS: ML100640188**

OFFICE:	DAO:sc	RGN IV/Task Force Lead	EDO/DEDR	EDO
NAME:	JAndersen /RA/	CCasto/RA by BM for/	BMallett/RA/	RWBorchardt/RA/
DATE:	03/05/10	03/05/10	03/05/10	03/5/10

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## **CHARTER FOR THE GROUNDWATER CONTAMINATION TASK FORCE**

### Objective

The objective of this Task Force is to reevaluate the staff's actions in response to recent incidents with tritium released into groundwater at Oyster Creek, Oconee, and Vermont Yankee, and the staff's response to recommendations made in the Liquid Radioactive Release Lessons Learned Task Force Final Report dated September 1, 2006 to determine whether the actions need to be augmented. The Task Force, should, as appropriate, identify and recommend actions that need to be augmented in order for the NRC to remain effective. When this task is complete, the Task Force may remain in effect to serve as a Steering Committee for the implementation of any identified recommendations.

### Scope

The task force review should include the following:

- a. Known inadvertent releases of radioactive liquid to the environment at power reactor sites, including power reactors in decommissioning that have occurred since the Lessons Learned Task Force Final Report 2006.
- b. The additional actions included in the agency follow up to recent incidents where tritium has been found in the ground water, monitoring wells and soil at the Vermont Yankee nuclear power plant. Below is a summary of those actions that the Task Force should review:
  1. Conduct two Workshops with External Stakeholders. One locally in Vermont near Vermont Yankee with the purpose of answering questions, putting the tritium in perspective with what we regulate and the potential for radiation exposure to the public, and listening to concerns from the external stakeholders. This one would be held in conjunction with the State Department of Public Service. The second one would be held near the NRC, Headquarters Office, with the purpose of answering questions regarding tritium and NRC follow up, and to discuss whether further actions should be taken in view of the recent tritium incidents and buried pipe leaks at nuclear power plants.
  2. Specific inspection actions taken at each site where tritium contamination has been found in groundwater wells.

ENCLOSURE

3. NRR guidance for follow up inspections to buried piping leaks, resulting in radioactive contamination of groundwater. The guidance can be used to direct inspections in this area for routine, baseline ROP and for license renewal inspections. The guidance will build on that used in the past to follow up on the industry ground water initiative and that used in license renewals. It will cover guidance for what should be considered as agency action in cases where a licensee's operating experience includes recent groundwater contamination incidents.
  4. The staff's response to the proposed December 2009 Industry Initiative on Buried Piping regarding inspection and response to incidents.
  5. The Interface and alignment with DHS, EPA and the States to discuss NRC actions in response to provide information and to achieve alignment.
  6. Meetings with Congressional Stakeholders to discuss NRC actions in response to Vermont Yankee and to tritium contamination from buried piping problems or other sources throughout the United States.
- c. The existing regulatory framework, including both the health physics aspects, the licensee reporting requirements (including making reports to state and local officials), and the regulatory requirements associated with the structures and systems from which the releases have originated.
  - d. Implications for decommissioning and decommissioning funding assurance.
  - e. International practices for similar incidents.
  - f. Communications method with external stakeholders, public, state and local officials, and other federal agencies to best convey the risk of these type incidents.

The scope of subjects considered by the task force should not necessarily be limited to those noted. The task force activities should not interfere with the agency's immediate response to the incidents being reviewed.

### Expected Product and Schedule

The task force will provide its observations, findings, and recommendations in the form of a written report to the Deputy Executive Director for Reactor and Preparedness Programs. The task force review activities should be completed by May 15, 2010.

### Staffing

The task force will consist of the following members.

Team Leader:	Charles A. Casto	
Assistant Team Leader:	Ho Neih	
Team Members:	NRR	to be identified later
	NMSS	to be identified later
	FSME	to be identified later
	RES	to be identified later
	OCA	to be identified later
	OGC	to be identified later
	Region I	identify a point of contact only
	Region II	identify a point of contact only
	Region III	to be identified later
	Region IV	identify a point of contact only

### Senior Management Interface

The task force will keep senior management informed on the status of the effort and provide early identification of significant findings. In addition, the task force will regularly interface with the cognizant OEDO staff to keep them abreast of progress.