



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II**  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

September 10, 2013

Mr. George T. Hamrick  
Site Vice President  
Brunswick Steam Electric Plant  
8470 River Road SE  
Southport, NC 28461-0429

**SUBJECT: BRUNSWICK NUCLEAR STATION UNITS 1 AND 2 - NOTIFICATION OF  
INSPECTION AND REQUEST FOR INFORMATION**

Dear Mr. Hamrick:

On October 15, 2013, the Nuclear Regulatory Commission will begin inspection activities for the BRUNSWICK NUCLEAR STATION UNITS 1 AND 2 in accordance with Temporary Instruction (TI) 2515/182, "Review of Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks." This inspection is scheduled to be performed from October 15 through 17, 2013, and will address the inspection requirements for Phase 2 of this TI.

In order to minimize the impact to your on-site resources, and to ensure a productive inspection, we have enclosed a list of documents needed for the preparation and implementation of this inspection. The documents that are requested for this inspection include all relevant documents that will allow the inspector(s) to adequately complete Phase 2 of this inspection.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Mr. Bill Murray, of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector Abhijit Sengupta at (404) 997-4430 or [Abhijit.Sengupta@nrc.gov](mailto:Abhijit.Sengupta@nrc.gov).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide

G. Hamrick

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Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**RA**

Steven J. Vias, Chief  
Engineering Branch 3  
Division of Reactor Safety

Docket Nos.: 50-324, 50-325  
License Nos.: DPR-62, DPR-71

Enclosures:  
Inspection Document Request  
Temporary Instruction (TI 2515/182)  
TI-182 Phase II Questions

cc: Distribution via Listserv

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PUBLICLY AVAILABLE     NON-PUBLICLY AVAILABLE SENSITIVE  
 NON-SENSITIVE    ADAMS:  Yes  
ACCESSION NUMBER: \_\_\_\_\_     SUNSI REVIEW COMPLETE  
 FORM 665 ATTACHED

OFFICE	RII:DRS	RII:DRS	RII:DRS				
SIGNATURE	<b>RA</b>	<b>RA</b>	<b>RA</b>				
NAME	A.Sengupta	C Fletcher	S Vias				
DATE	09/ 6 /2013	09/9 /2013	09/10 /2013				
E-MAIL COPY?	YES NO	YES NO	YES NO				

OFFICIAL RECORD COPY    DOCUMENT NAME: S:\DRS\ENG BRANCH  
3\INSPECTIONS\WORKING DOCUMENTS\TI182 REQUEST FOR INFORMATION  
LETTER\2013\Brunswick RFI TI182 Phase 2- AS.DOCX

Letter to George Hamrick from Steven J. Vias dated September 10, 2013.

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT UNITS 1 AND 2

## TEMPORARY INSTRUCTION (TI) 2515/182 INSPECTION DOCUMENT REQUEST

**Inspection Dates:** October 15-17, 2013

**Inspection Procedures:** TI 2515/182, "Review of Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks"

**Inspector:** Abhijit Sengupta, Reactor Inspector

### Information Requested for the Preparation and Completion of the In-Office Inspection

The following documents listed below are requested (electronic copy, if possible) by October 5, 2013, to facilitate the preparation for the on-site inspection week:

1. Organization list of site individuals responsible for the site's underground piping and tanks program.
2. Copy of Site Underground Piping and Tanks program.
3. Please review the Enclosure 2 "TI -182 PHASE 2 QUESTIONS" and provide response and/or document requests.
4. Schedule for completion of the following NEI 09-14, "Guideline for the Management of Underground Piping and Tank Integrity," Revision 3, attributes:

#### Buried Piping

Procedures and Oversight  
Risk Ranking  
Inspection Plan  
Plan Implementation  
Asset Management Plan

#### Underground Piping and Tanks

Procedures and Oversight  
Prioritization  
Condition Assessment Plan  
Plan Implementation  
Asset Management Plan

### ***Information to be provided On-Site to the Inspector following the Entrance Meeting***

- A. Location maps of buried and underground piping and tanks identified by the inspector from the information requested for the preparation week.
- B. Copy of EPRI 1016456, "Recommendations for an Effective Program to Control the Degradation of Buried Pipe and Underground Piping and Tanks."
- C. Self- or third-party assessments of the Underground Piping and Tanks Program (if any have been performed).

D. For any of the NEI 09-14, Rev. 3, attributes identified below which have been completed prior to the NRC's onsite inspection, provide written records that demonstrate that the program attribute is complete.

Buried Piping

- Procedures and Oversight
- Risk Ranking
- Inspection Plan
- Plan Implementation
- Asset Management Plan

Underground Piping and Tanks

- Procedures and Oversight
- Prioritization.
- Condition Assessment Plan
- Plan Implementation
- Asset Management Plan

Inspector Contact Information

Abhijit Sengupta  
Reactor Inspector  
404-997-4430  
Abhijit.Sengupta@nrc.gov

Mailing Address

US NRC- Region II  
Attn: Abhijit Sengupta  
245 Peachtree Center Avenue, Suite 1200  
Atlanta, GA 30303

**TI 2515-182**  
**Review of Implementation of the Industry Initiative to Control Degradation of**  
**Underground Piping and Tanks**  
**Phase 2 Questions**

		<b>Questions</b>	<b>Response</b>
Question Number	Subpart		
		<b>Initiative Consistency</b>	
1	a	Has the licensee taken any deviations to either of the initiatives?	Yes / No
	b	If so, what deviations have been taken and what is (are) the basis for these deviations?	
2	a	Does the licensee have an onsite buried piping program manager (owner) and, potentially, a staff?	Yes / No
	b	How many buried piping program owners have there been since January 1, 2010?	
	c	How many other site programs are assigned to the buried piping program owner?	
3	a	Does the licensee have requirements to capture program performance, such as system health reports and performance indicators?	Yes / No
	b	Are these requirements periodic or event driven?	Periodic / Event Driven / None
	c	Are there examples where these requirements have been successfully used to upgrade piping systems or to avert piping or tank leaks?	Yes / No
4	a	Does the licensee have a program or procedure to confirm the as-built location of buried and underground piping and tanks at the plant?	Yes / No
	b	Has the licensee used this program?	Yes / No

	c	Was the program effective in identifying the location of buried pipe?	Yes / No
5		For a sample of buried pipe and underground piping and tanks (sample size at least 1 high and 1 low risk/priority pipe or tank), did the risk ranking and/or prioritization process utilized by the licensee produce results in accordance with the initiative guidelines, i.e., which emphasize the importance of components which have a high likelihood and consequence of failure and deemphasize the importance of components which have a low likelihood and consequence of failure?	Yes / No Sample size examined _____
6	a	As part of its risk ranking process did the licensee estimate/determine the total length of buried/ underground piping included in the initiatives?	Yes / No
	b	As part of its risk ranking process did the licensee estimate/determine the total length of high risk buried/underground piping included in the initiatives?	Yes / No
		<b>Preventive Actions / System Maintenance</b>	
1	a	For uncoated steel piping, has the licensee developed a technical basis for concluding that structural (e.g. ASME Code minimum wall, if applicable) and leaktight integrity of buried piping can be maintained?	Yes / No / Not Applicable (no uncoated buried steel pipe)
	b	Is the technical basis provided as justification by the licensee consistent with the initiative (including its reference documents) or industry standards (e.g. NACE SP0169)	Yes / No
2	a	For buried steel, copper, or aluminum piping or tanks which are not cathodically protected, has the licensee developed a technical basis for concluding that structural (e.g. ASME Code minimum wall, if applicable) and leaktight integrity of buried piping can be maintained?	Yes / No / Not Applicable (no buried steel, copper, or aluminum piping which is not cathodically protected)

	b	Is the technical basis provided as justification by the licensee consistent with the initiative (including its reference documents) or industry standards (e.g. NACE SP0169)	Yes / No
3	a	For licensees with cathodic protection systems, does the licensee have procedures for the maintenance, monitoring and surveys of this equipment?	Yes / No / Not Applicable (no cathodic protection systems)
	b	Are the licensee procedures consistent with the initiative (including its reference documents) or industry standards (e.g. NACE SP0169)?	Yes / No
	c	Is the cathodic protection system, including the evaluation of test data, being operated and maintained by personnel knowledgeable of, or trained in, such activities	Yes / No
4	a	Is there a program to ensure chase and vault areas which contain piping or tanks subject to the underground piping and tanks initiative are monitored for, or protected against, accumulation of leakage from these pipes or tanks?	Yes / No / N/A (No piping in chases or vaults)
		<b>Inspection Activities / Corrective Actions</b>	
1	a	Has the licensee prepared an inspection plan for its buried piping and underground piping and tanks?	Yes / No
	b	Does the plan specify dates and locations where inspections are planned?	Yes / No
	c	Have inspections, for which the planned dates have passed, occurred as scheduled or have a substantial number of inspections been deferred?	Occurred as scheduled / Deferred
2	a	Has the licensee experienced leaks and/or significant degradation in safety related piping or piping carrying licensed material since January 1, 2009?	Leaks Yes / No Degradation Yes / No
	b	If leakage or significant degradation did occur, did the licensee determine the cause of the leakage or degradation?	Yes / No

	c	Based on a review of a sample of root cause analyses for leaks from buried piping or underground piping and tanks which are safety related or contain licensed material, did the licensee's corrective action taken as a result of the incident include addressing the cause of the degradation?	Yes / No / N/A (no leaks)
	d	Did the corrective action include an evaluation of extent of condition of the piping or tanks and possible expansion of scope of inspections? (Preference should be given to high risk piping and "significant" leaks where more information is likely to be available).	Yes / No / N/A (no leaks)
3	a	Based on a review of a sample of NDE activities which were either directly observed or for which records were reviewed, were the inspections conducted using a predetermined set of licensee/contractor procedures?	Yes / No
	b	Were these procedures sufficiently described and recorded such that the inspection could be reproduced at a later date?	Yes / No
	c	Were the procedures appropriate to detect the targeted degradation mechanism?	Yes / No
	d	For quantitative inspections, were the procedures used adequate to collect quantitative information?	Yes / No
4	a	Did the licensee disposition direct or indirect NDE results in accordance with their procedural requirements?	Yes / No
5	a	Based on a sample of piping segments, is there evidence that licensees are substantially meeting the pressure testing requirements of ASME Section XI IWA-5244?	Yes / No