



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

November 20, 2012

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

**SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2 – NOTIFICATION OF NRC
INSPECTION AND REQUEST FOR INFORMATION**

Dear Mr. Mr. Pacilio:

On January 7, 2013, the U. S. Nuclear Regulatory Commission, (NRC) will begin the Temporary Instruction (TI) inspection, "Review of Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks," (TI 2515-182) at your Braidwood Station Units 1 and 2. This on-site inspection is scheduled to be performed January 7–11, 2013.

In order to minimize the impact to your on-site resources, and to ensure a productive inspection for both sides, we have enclosed a list of documents pertinent to our inspection. The documents that are requested for this inspection include all relevant documents that will allow the inspector(s) to adequately complete Phase II of this inspection. It is important that all of these documents are up-to-date, and complete, in order to minimize the number of additional documents requested during the preparation and/or the on-site portions of the 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. A. Murtaza, of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector Mr. M. Holmberg at (630) 829-9748.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, Control Number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

M. Pacilio

-2-

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 document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

David E. Hills, Chief
Engineering Branch 1
Division of Reactor Safety

Docket No. 50 456; 50 457
License No. NPF-72; NPF-77

Enclosure: TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT
REQUEST

cc w/encl: Distribution via ListServ™

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

Inspection Dates: January 7 – 11, 2013

Inspection Procedures: Temporary Instruction 2515-182, "Review of Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks"

Inspector: Mel Holmberg
(630) 829-9748
mel.holmberg@nrc.gov

A. Information Requested for the in-Office Preparation Week

The following documents listed below are requested (electronic copy CD ROM if possible) by December 27, 2012, 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 attached "Questions" list and provide the response and/or document requests. The questions identified with the word "Prep" (highlighted in bold) are the items to be provided in advance of the inspection to support preparation for on-site week.
4. Schedule for completion of the following NEI 09-14 Revision 1 attributes:

Buried Piping

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

Underground Piping and Tanks

- Procedures and Oversight;
- Prioritization;
- Condition Assessment Plan;

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

- Plan Implementation; and
- Asset Management Plan.

The inspector may select specific items from the information requested for the preparation week and request follow-up documents during the on-site inspection week.

B. Information to be Provided On-Site to the Inspector Following the Entrance Meeting

1. Location maps of buried and underground piping and tanks identified by the inspector from the information requested for the preparation week.
2. Copy of Electric Power Research Institute (EPRI) document "Recommendations for an Effective Program to Control the Degradation of Buried Pipe."
5. Self or third party assessments of the Underground Piping and Tanks Program (if any have been performed).
6. Please review the attached "Questions" list and provide response and/or document requests. The questions identified with the word "Onsite" (highlighted in bold) are the items to be provided to the inspector on-site at the entrance meeting.
7. For any of the NEI 09-14 Revision 1 attributes identified below which have been completed prior to the NRC's on-site inspection, provide written records that demonstrate that the program attribute is complete.

Buried Piping

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

Underground Piping and Tanks

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

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

	Questions	Response
Prep week/ Onsite week	Initiative Consistency	
Prep	Has the licensee taken any deviations to either of the initiatives?	Yes/No If applicable, identify the specific NEI 09-14 Rev. 1 requirements subject to the deviations.
Prep	If so, what deviations have been taken and what is (are) the basis for these deviations?	If applicable, provide the basis for each deviation from NEI 09-14 Rev. 1 and any associated corrective action reports.
Prep	Does the licensee have an onsite buried piping program manager (owner) and, potentially, a staff?	Yes/No If yes identify owner(s). If no explain.
Onsite	How many buried piping program owners have there been since January 1, 2010?	Provide list of individuals responsible for the site buried piping program since January 1, 2010.
Onsite	How many other site programs are assigned to the buried piping program owner?	List all site programs that are under the direct responsibility of the site's current buried piping program owner.
Onsite	Does the licensee have requirements to capture program performance, such as system health reports and performance indicators?	Yes/No Provide copies of most recent systems health reports and a copy of the procedure that requires these reports (if applicable).
Onsite	Are these requirements (for program health reports or performance indicators) periodic or event driven?	Periodic/Event Driven/None Provide copies of the procedure that directs the frequency of reports (if applicable)
Onsite	Are there examples where these requirements have been successfully used to upgrade piping systems or to avert piping or tank leaks?	Yes/No Provide results of any effectiveness reviews related to use of system health reports or performance indicators (if applicable)
Prep	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 Provide a copy of the procedure (if applicable).

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

Prep	Has the licensee used this program?	Yes/No Identify if the procedure above has been implemented and if so to what extent (if applicable).
Prep	Was the program effective in identifying the location of buried pipe?	Yes/No Explain how as-built location of buried pipe and underground piping and tanks was confirmed.
Prep/Onsite	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 _____ Prep: Provide copy of site's risk ranking procedures that identify how buried and underground pipe and tanks were risk ranked including methodology followed. Prep: Provide list of buried and underground pipe and tanks in the high and low risk category. Onsite: Provide copies of drawings and/or database printouts that identify the risk ranking for each buried pipe segment or tank in each system selected by the inspector from the list of high and low risk categories of buried pipe/tank segments. Onsite: Explain how risk methodology was applied to determine the risk of pipe segments or tanks selected by the inspector above.
Prep	As part of its risk ranking process did the licensee estimate/determine the total length of buried/ underground piping	Yes/No If yes, identify the total length of

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

	included in the initiatives?	buried/underground piping.
Prep	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 If yes, identify the total length of high risk buried/underground piping
	Preventive Actions/System Maintenance	
Onsite	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)
Onsite	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 Provide two specific examples that document evaluations of steel, copper or aluminum piping or tanks without cathodic protection and include the technical basis and referenced source documents supporting this evaluation (if applicable).
Onsite	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)

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

Onsite	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 Provide two specific examples that document evaluations of uncoated steel piping and include the technical basis and referenced source documents supporting this evaluation (if applicable).
Onsite	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) Provide copies of these procedures (if applicable).
Onsite	Are the licensee procedures consistent with the initiative (including its reference documents) or industry standards (e.g., NACE SP0169)?	Yes/No Provide copies of the industry standards applicable to the cathodic protection system procedures and identify any deviations taken from these standards.
Onsite	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 Provide completed records of training or qualification applicable to personnel evaluating test data, operating or maintaining cathodic protection systems.
Onsite	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) Provide copy of procedures (if applicable).
	Inspection Activities / Corrective Actions	
Prep	Has the licensee prepared an inspection plan for its buried piping and underground piping and tanks?	Yes/No

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

Onsite	Does the plan specify dates and locations where inspections are planned?	Yes/No Provide copy of inspection plan and associated implementation procedures.
Prep	Have inspections, for which the planned dates have passed, occurred as scheduled or have a substantial number of inspections been deferred?	Identify inspections of buried and underground piping or tanks that did not occur as originally scheduled (e.g., date originally scheduled and date actually accomplished). Identify planned inspections of buried and underground piping or tanks that have been deferred from their originally planned schedule (e.g., date originally scheduled and date currently scheduled).
Prep	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 If yes, identify the pipe segments that have leaked and identify site buried pipe program definition of "licensed material."
Prep	If leakage or significant degradation did occur, did the licensee determine the cause of the leakage or degradation?	Yes/No If yes, identify the cause for leakage from each pipe segment.
Onsite	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) Provide root or apparent cause report for identified leaks (if applicable) and corrective action records.

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

Onsite	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) Provide corrective action documents that define the extent of condition for cause of significant leaks (if applicable).
Onsite	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 Provide a copy of the direct and indirect NDE procedures used to examine buried pipe and tanks.
Onsite	Were these procedures sufficiently described and recorded such that the inspection could be reproduced at a later date?	Yes/No Provide a copy of completed direct NDE records for the last three direct examinations of buried pipe and tanks. Provide a copy of completed indirect NDE records for the last three indirect examinations of buried pipe and tanks.
Onsite	Were the procedures appropriate to detect the targeted degradation mechanism?	Yes/No Identify the degradation mechanisms that the last three direct and indirect examinations of buried pipe and tanks are intended to detect.
Onsite	For quantitative inspections, were the procedures used adequate to collect quantitative information?	Yes/No Identify the active degradation mechanisms that each type of NDE procedure is credited for detecting and/or monitoring within your buried pipe and tanks program.

TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

Onsite	Did the licensee disposition direct or indirect NDE results in accordance with their procedural requirements?	Yes/No Provide a copy of the procedure used to evaluate the results of the last three direct and three indirect NDE results from buried pipe and tank components.
---------------	---	--

M. Pacilio

-2-

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 document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

David E. Hills, Chief
Engineering Branch 1
Division of Reactor Safety

Docket No. 50 456; 50 457
License No. NPF-72; NPF-77

Enclosure: TEMPORARY INSTRUCTION (TI 2515-182) INSPECTION DOCUMENT REQUEST

cc w/encl: Distribution via ListServ™

DISTRIBUTION:

Cayetano Santos
RidsNrrDorLp3-2 Resource
RidsNrrPMBraidwood Resource
RidsNrrDirslrib Resource
Chuck Casto
Cynthia Pederson
Steven Orth
Jared Heck
Allan Barker
DRPIII
DRSIII
Christine Lipa
Carole Ariano
Linda Linn
Tammy Tomczak

DOCUMENT NAME: Braidwood TI-182 Phase 2 RFI-msh

Publicly Available Non-Publicly Available Sensitive Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII		RIII				
NAME	MHolmberg:ls		DHills				
DATE	11/20/12		11/20/12				

OFFICIAL RECORD COPY