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# CENG<sub>SM</sub>

a joint venture of



NINE MILE POINT  
NUCLEAR STATION

September 12, 2012

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

**ATTENTION:** Document Control Desk

**SUBJECT:** Nine Mile Point Nuclear Station  
Unit No. 1; Docket No. 50-220

Discovery of Tritium in Groundwater In-Leakage  
30-Day Report in Accordance with the Industry Ground Water Protection Initiative

Nine Mile Point Nuclear Station, LLC (NMPNS) hereby submits the attached 30-day report in accordance with Nuclear Energy Institute (NEI) 07-07, "Industry Ground Water Protection Initiative – Final Guidance Document," dated August 2007. Samples taken from groundwater in-leakage to the Nine Mile Point Unit 1 Screenhouse building were found to contain tritium in concentrations that exceeded the threshold value for voluntary reporting in accordance with the guidance in NEI 07-07. The initial NRC notification of this condition was completed on August 14, 2012 (Event Number 48187).

This letter contains no regulatory commitments. Should you have any questions regarding the information in this submittal, please contact John J. Dosa, Director Licensing, at (315) 349-5219.

Very truly yours,

 - 9/12/12

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Attachment: Nine Mile Point Unit 1, Discovery of Tritium in Groundwater In-Leakage, 30-Day Report in Accordance with the Industry Ground Water Protection Initiative

cc: Regional Administrator, Region I, NRC  
Project Manager, NRC  
Resident Inspector, NRC  
A. L. Peterson, NYSERDA  
B. Frymire, NYPSC  
T. Rice, NYS DEC  
C. Costello, NYSDOH  
T. Murakami, NYSDEC  
M. Anderson, ANI  
R. Andersen, NEI  
P. Egan, Oswego County  
K. Burdick, Scriba Town Supervisor

**ATTACHMENT**

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**NINE MILE POINT UNIT 1**

**DISCOVERY OF TRITIUM IN GROUNDWATER IN-LEAKAGE  
30-DAY REPORT IN ACCORDANCE WITH THE  
INDUSTRY GROUND WATER PROTECTION INITIATIVE**

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**ATTACHMENT  
NINE MILE POINT UNIT 1  
DISCOVERY OF TRITIUM IN GROUNDWATER IN-LEAKAGE, 30-DAY REPORT IN  
ACCORDANCE WITH THE INDUSTRY GROUND WATER PROTECTION INITIATIVE**

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This report is being submitted in accordance with the Nuclear Energy Institute (NEI) 07-07, Industry Ground Water Protection Initiative – Final Guidance Document. The report was generated as a result of the Nine Mile Point Nuclear Station (NMPNS) Groundwater Monitoring Program tritium result for building in-leakage which triggered the communication protocol as required by the NEI 07-07.

On August 13, 2012, analyses of samples taken from groundwater in-leakage to the Nine Mile Point Unit 1 (NMP1) Screenhouse building confirmed the presence of tritium at a concentration of approximately 33,000 to 44,000 picocuries per liter (pCi/l). The discovery was made during the conduct of the site's ongoing groundwater monitoring program. The concentration was above the 30,000 pCi/l threshold for voluntarily reporting for a non-drinking water pathway, as indicated in NEI 07-07. On August 14, 2012, NMPNS voluntarily notified the following agencies: New York State (NYS) Department of Environmental Conservation, NYS Department of Health, NYS Public Service Commission, local officials, NEI, Institute of Nuclear Power Operations (INPO) and American Nuclear Insurers (ANI). A 10CFR50.72(b)(2)(xi) report was made to the Nuclear Regulatory Commission (NRC) as a result of the State and Local notifications.

NMPNS established a cross-functional Issue Response Team (IRT) to investigate possible sources of tritium in the groundwater in-leakage. The IRT reviewed the hydrogeologic models prepared in accordance with the NEI 07-07 guidance and the location of groundwater monitoring wells in the area. Based on this review, six (6) additional wells are being installed to better define the potential tritium plume and verify groundwater flows in the area. The IRT identified twenty five (25) potential failure modes that could be the source of the tritium. Twenty one (21) of these failure modes have been refuted and the remaining four (4) are currently being investigated.

NMPNS is currently collecting the building groundwater in-leakage in storage tanks, determining tritium levels and then discharging the water in accordance with the NMP1 Offsite Dose Calculation Manual (ODCM) and discharge procedures. The potential or bounding annual dose to a member of the public from the discharge water is calculated in accordance with the NMP1 ODCM. Currently, NMP1 has discharged approximately 84,000 gallons of water with a calculated projected annual dose of 5.58E-6 millirem (mrem). The current projected annual dose is well below the Environmental Protection Agency's 40 CFR 190.10 Subpart B dose for the uranium fuel cycle of 25 mrem/year to the total body.

Monitoring wells located at the site boundary indicate that tritium in the groundwater has not migrated off the plant property. Accordingly, there is no public exposure pathway in groundwater and no estimated annual dose to any member of the public via a groundwater pathway.

Since there is no estimated annual dose increase to a member of the public from the groundwater pathway and discharges from the collection tanks are managed in accordance with the NMP1 ODCM, no corrective actions are necessary to reduce the projected annual dose to a member of the public to less than the limits of 10 CFR 50, Appendix I of 5 mrem to the total body or any organ. NMPNS will continue to monitor the event and will initiate corrective actions as needed.