DAVE BAXTER
Vice President
Oconee Nuclear Station

Duke Energy
ON01VP / 7800 Rochester Highway
Seneca, SC 29672

864-873-4460
864-873-4208 fax
dabaxter@dukeenergy.com

March 3, 2010

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C., 20555-001

Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station, Units 1, 2, and 3
Renewed Facility Operating License, DPR-38, DPR-47, and DPR-55
Docket Numbers 50-269, 50-270, and 50-287

30-Day Report Pursuant to the Ground Water Protection Initiative Concerning
Oconee Nuclear Station Ground Water Monitoring Wells GM-7R and GM-7DR

Duke Energy Carolinas, LLC (Duke Energy) is submitting the attached 30-day report pursuant to NEI 07-07 [FINAL], "Industry Ground Water Protection Initiative," dated August, 2007. Samples obtained from ground water monitoring wells GM-7R and GM-7DR on January 26, 2010, contained tritium concentrations that triggered the communication protocol of NEI 07-07 on February 8, 2010.

There are no regulatory commitments contained in this letter. If you have any questions on this matter, please contact Bob Meixell, Oconee Regulatory Compliance, at (864) 873-3279.

Sincerely,

Richard J. Freudenberger

for Dave Baxter, Vice President
Oconee Nuclear Station

Attachment:
30-Day Report per NEI 07-07 [FINAL], "Industry Ground Water Protection Initiative,"
Oconee Nuclear Station, Units 1, 2 and 3

IE22

 NRR

bc w/attachment:

Mr. Luis Reyes
USNRC – Region II
Sam Nun Atlanta Federal Center
Suite 23T85, 61 Forsyth St., SW
Atlanta, GA 30303-8931

Mr. John Stang
Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop O-8 G9A
Washington, DC 20555

Mr. Andy Sabisch
NRC Senior Resident Inspector
Oconee Nuclear Station

Ms. Susan E. Jenkins
Manager, Infectious and
Radioactive Waste Management
Bureau of Land and Waste Management
Department of Health & Environmental Control
2600 Bull Street, Columbia, SC 29201

Mr. Tom Knight
Manager, Aboveground Storage Tank (AST)
Petroleum Restoration & Site Environmental Investigations
Bureau of Land and Waste Management
Department of Health & Environmental Control
2600 Bull Street, Columbia, SC 29201

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30-DAY REPORT PER NEI 07-07 [FINAL],
INDUSTRY GROUND WATER PROTECTION INITIATIVE,
OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3

i. This report is being submitted in support of NEI 07-07, Industry Ground Water Protection Initiative.
   a. This report was generated as a result of the ground water monitoring results for wells GM-7R and GM-7DR. These results triggered the communication protocol of NEI 07-07 on February 8, 2010.

ii. Samples obtained from groundwater monitoring wells contained tritium in the following concentrations:
   a. GM-7R; 24,400 picocuries per liter (pCi/l)
   b. GM-7DR; 35,400 picocuries per liter (pCi/l)

iii. On February 8, 2010, Oconee was notified by the Duke Energy Environmental Lab that samples taken from ground water monitoring wells GM-7R and GM-7DR on January 26, 2010, contained tritium levels that triggered the NEI 07-07 ground water communication protocol. On February 9, 2010, Duke Energy verbally notified the NRC (NRC Event Notification number 45690) and appropriate state and local agencies of the on-site environmental monitoring well sample results indicated in (ii) above.

Elevated tritium levels in ground water samples were identified in well GM-7R and adjacent well GM-7 in 2008. Duke Energy began investigation by pressure testing the Liquid Waste Discharge (LWD) piping. A portion of the LWD piping is located in the vicinity of the area showing elevated tritium concentrations. This piping was pressure tested from the Turbine Building to Keowee Hydro. This testing did not indicate any leakage present.

Remote video inspection of the Turbine Building Sump Monitor Tank discharge piping along the east side of the Turbine Building has been conducted. This piping is immediately up-gradient of GM-7 wells. As part of the investigation, Duke Energy has limited pumping Turbine Building Sump water into this yard drainage system.

A hydro-geologic model has been developed by an independent engineering firm with expertise in groundwater flow. Since December 2009, Duke Energy has installed 14 additional ground water monitoring wells and installation of additional wells is in progress. The additional wells will be used, along with existing wells, to refine the model and define the horizontal and vertical extent of tritium observed in ground water.

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30-DAY REPORT PER NEI 07-07 [FINAL],
INDUSTRY GROUND WATER PROTECTION INITIATIVE,
OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3

iv. The wells displaying tritium activity are ground water monitoring wells, and not drinking water wells. Samples from surrounding ground water monitoring wells indicate that tritium has not migrated to the site boundary. South Carolina Department of Health and Environmental Control (DHEC) sampling of residential wells around the Oconee Nuclear Station, and Duke Energy samples from surrounding monitoring wells indicate that tritium in ground water has not migrated off the plant site. Therefore there is no public exposure pathway and Duke Energy determined that there is no estimated annual dose to any member of the public associated with this event.

v. Since there is no estimated annual dose increase to a member of the public from this event, 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.