



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

July 25, 2006
3F0706-03

Mr. Stuart A. Richards, Deputy Director
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Groundwater Protection – Data Collection Questionnaire

Dear Mr. Richards:

The nuclear industry, in conjunction with the Nuclear Energy Institute, has developed a questionnaire to facilitate the collection of groundwater data at commercial nuclear reactor sites. The objective of the questionnaire is to compile baseline information about the current status of site programs for monitoring and protecting groundwater and to share that information with NRC. The completed questionnaire for Crystal River Unit 3 is enclosed.

This submittal contains no new regulatory commitments.

If you have any questions regarding this submittal, please contact Mr. Paul Infanger, Supervisor, Licensing and Regulatory Programs, at (352) 563-4796.

Sincerely,

J. A. Franke
Plant General Manager

Enclosure

xc: USNRC Document Control Desk
USNRC Resident Inspector – Crystal River Unit 3
NRR Project Manager – Crystal River Unit 3
USNRC Regional Administrator – Region II
Ralph Andersen, Nuclear Energy Institute

PROGRESS ENERGY FLORIDA, INC.

CRYSTAL RIVER - UNIT 3

DOCKET NUMBER 50-302/LICENSE NUMBER DPR-72

ENCLOSURE

GROUNDWATER PROTECTION - DATA COLLECTION QUESTIONNAIRE

Groundwater Protection – Data Collection Questionnaire

1. **Briefly describe the program and/or methods used for detection of leakage or spills from plant systems, structures, and components that have a potential for an inadvertent release of radioactivity from plant operations into groundwater.**
 - Crystal River Unit 3 has programs and procedures in place to rapidly identify and correct leakage including those in outdoor areas. Operations personnel perform routine rounds of plant systems and structures daily. These rounds include the requirements to identify and report leaks and spills into the site work request system and/or the site corrective action program. Response to spills includes notification of Control Room and Radiation Protection personnel for assessment and cleanup.
 - Health Physics personnel perform dose rate and contamination surveys weekly within the Protected Area, including taking smears of areas around storm drains.
 - There are no underground tanks at this facility that contain radioactive materials. There are above ground tanks that are outside the immediate facility buildings that contain radioactive liquids. Potential leak sources and components have been identified.
 - The spent fuel pool system has a functional leak detection system. The tell-tale drains are monitored daily on Operator rounds and documented in site logs. It should be noted that the spent fuel pools do not sit on the bottom floor of the facility.
 - Engineers perform periodic walk downs of the systems for which they are responsible. These rounds include the requirements to identify and report leaks and spills into the site work request system and/or the site corrective action program. Response to spills includes notification of Control Room and Radiation Protection personnel for assessment and cleanup.
 - Leakage from components that result in an unplanned release are documented on a Nuclear Condition Report (NCR) and a determination of reportability is made by plant personnel, including notification of required agencies, if necessary.

2. **Briefly describe the program and/or methods for monitoring onsite groundwater for the presence of radioactivity released from plant operations.**
 - Presently, there are no on-site groundwater monitoring stations utilized by the Radiological Environmental Monitoring Program (REMP). The closest groundwater monitoring well is 3.6 miles east of the facility. The well is sampled and analyzed for tritium and gamma radionuclides. There are three drinking water wells that are also sampled quarterly for the same parameters. The drinking water wells are located off-site: (1) ESE 7.4 miles from the facility, (2) ESE 6.0 miles from the facility, and (3) N 5.3 miles from the facility.

- Typical detection levels in pCi/l are as follows:

H-3	< 147
Mn-54	< 5
Fe-59	< 8
Co-58	< 5
Co-60	< 5
Zn-65	< 9
Zr-Nb-95	< 7
I-131	< 5
Cs-134	< 5
Cs-137	< 4
Ba-La-140	< 15

- Due to the direction of groundwater movement at the facility (toward the southwest and the Gulf of Mexico) and the coastal location of the facility, future sources of drinking water will not be impacted by facility operation. The groundwater at the facility proper is too saline for use as a potable water source. Hence, well locations east of the facility were chosen as sources of drinking water.
- 3. If applicable, briefly summarize any occurrences of inadvertent releases of radioactive liquids that had the potential to reach groundwater and have been documented in accordance with 10 CFR 50.75(g).**
 - On October 2, 1999, during a secondary plant condensate release to the on-site percolation pond, a leak in the fiberglass wastewater line occurred that resulted in a small amount of water leaking onto the ground. The water contained low level tritium and secondary condensate corrosion control treatment chemicals. All affected soil was excavated. There was no groundwater contamination from this spill. This event was documented on precursor card (PC) 3-C99-3279.
 - 4. If applicable, briefly summarize the circumstances associated with any onsite or offsite groundwater monitoring result indicating a concentration in groundwater of radioactivity released from plant operations that exceeds the maximum contaminant level (MCL) established by the USEPA for drinking water.**
 - There have been no instances of groundwater contamination that remotely challenged the MCL for drinking water.
 - 5. Briefly describe any remediation efforts undertaken or planned to reduce or eliminate levels of radioactivity resulting from plant operations in soil or groundwater onsite or offsite.**
 - There was one instance (reference response to question 3 above) of remediation of a leaking pipe on a secondary plant discharge pipe to the site percolation pond that resulted in a small amount of secondary plant water containing low levels of tritium leaking into the soil. The liquid did not reach the groundwater and all affected soil material was excavated, as necessary, and disposed of.