

June 2, 2006

Mr. William Snell
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road
Lisle, IL 60532-4351

SUBJECT: ANALYTICAL RESULTS FOR FOUR WATER SAMPLES, BATCH THREE, FROM THE VICINITY OF THE DRESDEN GENERATING STATION, DRESDEN, ILLINOIS [INSPECTION REPORT NO. 050-00237/2006-007] (RFTA NO. 06-001)

Dear Mr. Snell:

The Oak Ridge Institute for Science and Education (ORISE) received four water samples on May 19, 2006, delivered by Teledyne-Brown Laboratory personnel, which were collected in the vicinity of the Dresden Generating Station in Dresden, Illinois. The samples were mistakenly shipped to the Teledyne-Brown Laboratory by the licensee.

The chain-of-custody identified the one water sample to be analyzed by gamma spectroscopy (GS). The four water samples were analyzed for tritium using a liquid scintillation analyzer at ORISE. Two of the four samples, D-06-03-02 and D-06-03-04, were consumed in the analytical process. The sample identifications and collection data are presented in Table 1. The GS data are presented in Table 2. The tritium data are presented in Table 3. The pertinent procedure references are provided in the specific tables.

ORISE's Quality Control (QC) requirements were met for these analyses. The QC files are available for your review upon request.

My contact information is listed below. You may also contact Wade Ivey at 865.576.9184 with any questions or comments.

Sincerely,



Dale Condra, Manager
Laboratory

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TABLE 1

**SAMPLE IDENTIFICATIONS
AND COLLECTION DATA
DRESDEN GENERATING STATION
DRESDEN, ILLINOIS**

ORISE Sample ID	NRC Region III Sample ID	Collection Date	Collection Time
1694W0045	D-06-3-01	4/27/2006	2:20 PM
1694W0046	D-06-3-02	4/27/2006	5:40 PM
1694W0047	D-06-3-03	4/27/2006	1:15 PM
1694W0048	D-06-3-04	4/27/2006	5:42 PM

TABLE 2

**CONCENTRATIONS OF SELECTED
GAMMA EMITTING RADIONUCLIDES
IN A SELECTED WATER SAMPLE
BY GAMMA SPECTROSCOPY CP1, REVISION 15
DRESDEN GENERATING STATION
DRESDEN, ILLINOIS**

ORISE Sample ID	NRC Region III Sample ID	Radionuclide Concentrations ^a (pCi/L)			
		Co-58	Co-60	Cs-134	Cs-137
1694W0047	D-06-3-03	5.8 ± 6.4 ^b	5.3 ± 5.2	3.7 ± 5.1	1.2 ± 9.2

^aThe range of MDCs for the selected radionuclides is 9.1 pCi/L to 10.0 pCi/L.

^bUncertainties represent the 95% confidence level, based on total propagated uncertainties.

TABLE 3

CONCENTRATIONS OF TRITIUM
 IN WATER SAMPLES
 BY LIQUID SCINTILLATION ANALYSIS
 AP2, REVISION 15; CP4, REVISION 3
 DRESDEN GENERATING STATION
 DRESDEN, ILLINOIS

ORISE Sample ID	NRC Region III Sample ID	Tritium Concentrations, TPUs, and MDCs ^a (pCi/L)
1694W0045	D-06-3-01	10 ± 110 ^b (190)
1694W0046	D-06-3-02	155,700 ± 4,200 (290)
1694W0047	D-06-3-03	90,400 ± 2,400 (220)
1694W0048	D-06-3-04	341,100 ± 9,200 (440)

^aMDCs are in parentheses.

^bUncertainties represent the 95% confidence level, based on total propagated uncertainties.