

June 28, 2006

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

SUBJECT: FINAL LETTER REPORT FOR ANALYTICAL RESULTS FOR EIGHT WATER SAMPLES, BATCH FOUR, 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 eight water samples on May 31, 2006 which were collected in the vicinity of the Dresden Generating Station in Dresden, Illinois. This letter report contains the original data submitted on June 16, 2006 and the total radiostrontium data. The chain-of-custody identified one water sample to be analyzed by gamma spectroscopy (GS), four samples to be analyzed for tritium, and four samples to be analyzed for total radiostrontium. 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 total radiostrontium data are presented in Table 4. 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

RDC:WPI:ar

Enclosure

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|----|-----------------------------------|---------------------|
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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
1694W0049	D-06-4-01	05/24/2006	12:00 AM
1694W0050	D-06-4-02	05/24/2006	12:06 AM
1694W0051	D-06-4-03	05/24/2006	3:30 PM
1694W0052	D-06-4-04	05/24/2006	3:40 PM
1694W0053	D-06-4-05	05/25/2006	10:20 AM
1694W0054	D-06-4-06	05/25/2006	10:25 AM
1694W0055	D-06-4-07	05/25/2006	11:20 AM
1694W0056	D-06-4-08	05/25/2006	11:25 AM

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
1694W0053	D-06-4-05	-3.4 ± 3.1 ^b	0.2 ± 2.8	-0.7 ± 2.7	3.6 ± 6.6

^aThe range of MDCs for the selected radionuclides is 4.4 pCi/L to 4.9 pCi/L.

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

TABLE 3

**CONCENTRATIONS OF TRITIUM
IN SELECTED 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)			
1694W0049	D-06-4-01	10	±	110 ^b	(180)
1694W0051	D-06-4-03	-30	±	110	(180)
1694W0053	D-06-4-05	30	±	110	(180)
1694W0055	D-06-4-07	70	±	110	(180)

^aMDCs are in parentheses.

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

TABLE 4

**CONCENTRATIONS OF TOTAL RADIOSTRONTIUM
IN SELECTED WATER SAMPLES
BY LOW BACKGROUND BETA COUNTING
AP4, REVISION 13; CP3, REVISION 2
DRESDEN GENERATING STATION
DRESDEN, ILLINOIS**

ORISE Sample ID	NRC Region III Sample ID	Radionuclide Concentrations, TPUs, and MDCs^a (pCi/L)
1694W0050	D-06-4-02	-1.07 ± 0.86 ^b (1.71)
1694W0052	D-06-4-04	0.2 ± 1.0 (1.9)
1694W0054	D-06-4-06	0.25 • 0.89 (1.57)
1694W0056	D-06-4-08	0.8 ± 1.0 (1.8)

^aMDCs are in parentheses.

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