

August 2, 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 SEVEN
 WATER SAMPLES, BATCH SIX, FROM THE VICINITY OF THE
 DRESDEN GENERATING STATION, DRESDEN, ILLINOIS
 [INSPECTION REPORT NO. 050-00237/2006-010] (RFTA NO. 06-001)**

Dear Mr. Snell:

The Oak Ridge Institute for Science and Education (ORISE) received Batch Six, consisting of seven water samples, on July 17, 2006 which were collected in the vicinity of the Dresden Generating Station in Dresden, Illinois. The samples were analyzed for tritium to a minimum detectable concentration of 180 pCi/L using a liquid scintillation analyzer. The chain-of-custody identified one water sample to be analyzed by gamma spectroscopy (GS). 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

RDC:WPI:ess

Enclosures

c: B. Watson, NMSS/DWMEP/DD/SP 7E18
 E. Knox-Davin, NRC/NMSS/TWPN 8A23
 G. Bonano, NRC Region III

E. Abelquist, ORISE
 S. Kirk, ORISE
 File 1694

Distribution approval and concurrence :	Initials
Technical Management Team Member	WJC
Quality Manager	ATP

Voice: 865.241.3242

Fax: 865.241.3248

E-mail: CondraD@orau.gov

TABLE 1

SAMPLE IDENTIFICATIONS
AND COLLECTION DATA
DRESDEN GENERATING STATION
DRESDEN, ILLINOIS

ORISE Sample ID	NRC Region III Sample ID	Collection Date	Collection Time
1694W0112	D-06-6-01	7/14/06	13:30
1694W0113	D-06-6-02	7/14/06	13:50
1694W0114	D-06-6-03	7/14/06	14:00
1694W0115	D-06-6-04	7/14/06	14:10
1694W0116	D-06-6-05	7/14/06	14:30
1694W0117	D-06-6-06	7/14/06	14:40
1694W0118	D-06-6-07	7/14/06	15:00

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
1694W0116	D-06-6-05	-1.9 ± 2.6 ^b	3.1 ± 3.1	2.9 ± 3.5	-3.5 ± 6.1

^aThe range of MDCs for the selected radionuclides is 4.2 pCi/L to 5.5 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)			
1694W0112	D-06-6-01	720	±	120 ^b	(180)
1694W0113	D-06-6-02	150	±	110	(180)
1694W0114	D-06-6-03	60	±	100	(180)
1694W0115	D-06-6-04	50	±	100	(180)
1694W0116	D-06-6-05	130	±	110	(180)
1694W0117	D-06-6-06	40	±	100	(180)
1694W0118	D-06-6-07	80	±	100	(180)

^aMDCs are in parentheses.

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