

August 18, 2006

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

SUBJECT: ANALYTICAL RESULTS FOR FIVE WATER SAMPLES, BATCH FOUR, FROM THE VICINITY OF LaSALLE STATION, LaSALLE, ILLINOIS
[INSPECTION REPORT NO. 050-00373/2006-005] (RFTA NO. 06-001)

Dear Mr. Cameron:

The Oak Ridge Institute for Science and Education (ORISE) received Batch Four, consisting of five water samples, July 25, 2006 which were collected in the vicinity of LaSalle Station in LaSalle, Illinois. The five water samples were analyzed for tritium to a minimum detectable concentration of 190 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:db

Enclosures

c: B. Watson, NMSS/DWMEP/DD/SP 7E18 E. Abelquist, ORISE
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File 1700

Distribution approval and concurrence :	Initials
Technical Management Team Member	JSK
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TABLE 1

**SAMPLE IDENTIFICATIONS
AND COLLECTION DATA
LaSALLE STATION
LaSALLE, ILLINOIS**

ORISE Sample ID	NRC Region III Sample ID	Collection Time	Collection Date
1700W0046	L-06-4-01	5/25/2006	10:25
1700W0047	L-06-4-02	5/24/2006	12:40
1700W0048	L-06-4-03	5/24/2006	13:40
1700W0049	L-06-4-04	5/23/2006	13:20
1700W0050	L-06-4-05	5/23/2006	13:00

TABLE 2

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

ORISE Sample ID	NRC Region III Sample ID	Radionuclide Concentrations ^a (pCi/L)			
		Co-58	Co-60	Cs-134	Cs-137
1700W0050	L-06-4-05	-3.9 ± 5.4 ^b	5.8 ± 4.2	2.1 ± 3.5	0.5 ± 3.1

^aThe range of MDCs for the selected radionuclides is 5.5 pCi/L to 9.0 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
LaSALLE STATION
LaSALLE, ILLINOIS

ORISE Sample ID	NRC Region III Sample ID	Tritium Concentrations, TPUs, and MDCs ^a (pCi/L)			
1700W0046	L-06-4-01	-70	±	110 ^b	(190)
1700W0047	L-06-4-02	-30	±	110	(190)
1700W0048	L-06-4-03	10	±	110	(190)
1700W0049	L-06-4-04	50	±	110	(190)
1700W0050	L-06-4-05	110	±	110	(190)

^aMDCs are in parenthesis.

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