

December 6, 2007

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

**SUBJECT: LETTER REPORT FOR SIX WATER SAMPLES FROM THE VICINITY OF THE QUAD CITIES NUCLEAR STATION, CORDOVA, ILLINOIS [INSPECTION REPORT NO. 050-00254/2007-005] (RFTA NO. 07-005)**

Dear Mr. Snell:

The Oak Ridge Institute for Science and Education (ORISE) received six water samples associated with the Quad Cities Nuclear Generating Station on November 9, 2007. The samples were analyzed for tritium using a liquid scintillation analyzer. The requested minimum detectable concentration of 200 pCi/L could not be attained for every sample due to the elevated concentrations of tritium. The sample identifications and collection data are presented in Table 1. The tritium data are presented in Table 2. 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:bf

c: T. Carter, NMSS/DWMEP 8F5  
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**TABLE 1**  
**SAMPLE IDENTIFICATIONS**  
**AND COLLECTION DATA**  
**QUAD CITIES NUCLEAR GENERATING STATION**  
**CORDOVA, ILLINOIS**

ORISE Sample ID	NRC Region III Sample ID	Collection Date	Collection Time
1755W0001	Q-07-1-01	10/17/2007	2:15 PM
1755W0002	Q-07-1-02	10/17/2007	1:40 PM
1755W0003	Q-07-1-03	10/19/2007	11:25 AM
1755W0004	Q-07-1-04	10/19/2007	11:05 AM
1755W0005	Q-07-1-05	10/19/2007	10:42 AM
1755W0006	Q-07-1-06	10/19/2007	10:05 AM

**TABLE 2**  
**TRITIUM CONCENTRATIONS**  
**IN WATER SAMPLES**  
**BY LIQUID SCINTILLATION ANALYSIS**  
**AP2, REVISION 16 AND CP4, REVISION 3**  
**QUAD CITIES NUCLEAR GENERATING STATION**  
**CORDOVA, ILLINOIS**

ORISE Sample ID	NRC Region III Sample ID	Tritium Concentrations (pCi/L)
1755W0001	Q-07-1-01	10 ± 110 <sup>a</sup> , 190 <sup>b</sup>
1755W0002	Q-07-1-02	-50 ± 110 , 190
1755W0003	Q-07-1-03	816,000 ± 34,000 , 1000
1755W0004	Q-07-1-04	811,000 ± 33,000 , 1000
1755W0005	Q-07-1-05	121,500 ± 5,000 , 300
1755W0006	Q-07-1-06	27,900 ± 1,200 , 200

<sup>a</sup>Uncertainties represent the 95% confidence level, based on total propagated uncertainties.  
<sup>b</sup>MDCs are after the comma.

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