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REGION I

April 20, 2007

APR 23 PM 12: 52

Mr. Jim Kottan
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

SUBJECT: INTERIM REPORT FOR COMPLETED ANALYSES FOR A SAMPLE FROM SET NINETEEN, FROM THE INDIAN POINT POWER STATION, BUCHANAN, NEW YORK [INSPECTION REPORT NO. 050-247/2006-007] [RFTA NO. 06-001]

Dear Mr. Kottan:

The Oak Ridge Institute for Science and Education (ORISE) received set 19, consisting of one water sample, associated with the Indian Point Power Station on December 20, 2006. Sample analysis was initiated based on your previous direction for handling samples from this licensee. Sample identification and collection data for the sample addressed in this report are presented in Table 1. Gamma spectroscopy, the hard-to-detect betas (iron-55, nickel-63, and tritium), technetium-99, total radiostrontium, alpha spectroscopy, plutonium-241, and carbon-14 data are provided in Tables 2 through 8, respectively. The pertinent procedure references are provided in each specific table.

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

The Ni-59 data was not reported due to problems with the calculation associated with the concentration of this radionuclide. Reporting of Ni-59 data has been discontinued until this problem can be resolved. In addition, this sample was not filtered due to the high level of activity and lack of suspended solids in the sample. After removing the tritium and carbon-14 aliquot, the sample was acidified before proceeding with the other requested analyses.

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

Sincerely,



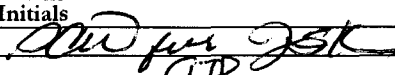

Dale Condra, Manager
Laboratory

RDC:WPI:km

Enclosures

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TABLE 1

**SAMPLE IDENTIFICATION
AND COLLECTION DATA
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Collection Date	Collection Time
1697W0123	U1-VC Sump	11/15/2006	NDP ^a

^aNo data provided.

TABLE 2

**CONCENTRATIONS OF SELECTED
GAMMA EMITTING RADIONUCLIDES
IN A WATER SAMPLE
BY GAMMA SPECTROSCOPY CP1, REVISION 15
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations ^a (pCi/L)	
1697W0123	U1-VC Sump	Co-58	
		0.4E+03 ± 1.5E+03 ^b , 2.6E+03	
		Co-60	
		2.2E+03 ± 1.3E+03 , 2.8E+03	
		Cs-134	
		24.6E+03 ± 3.1E+03 , 1.6E+03	
		Cs-137	
		46.2E+05 ± 1.5E+05 , 0.07E+05	

^aThe MDCs are after the comma.

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

TABLE 3

**CONCENTRATIONS OF HARD-TO-DETECT
BETA EMITTING RADIONUCLIDES
IN A WATER SAMPLE
BY LIQUID SCINTILLATION ANALYSIS CP4, REVISION 3
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations ^a (pCi/L)		
		Fe-55 ^b	Ni-63 ^c	H-3 ^d
1697W0123	U1-VC Sump	50 ± 47 ^e , 79	31.5E+04 ± 2.2E+04 , 0.1E+04	7.9E+07 ± 0.26E+07 , 0.00006E+07

^aThe MDCs for each radionuclide are after the comma.

^bFe-55 analyzed using procedure AP13, Revision 4.

^cNi-63 analyzed using procedure AP17, Revision 0.

^dH-3 analyzed using procedure AP2, Revision 15.

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

TABLE 4

**CONCENTRATIONS OF TECHNETIUM-99 (Tc-99)
IN A WATER SAMPLE
BY LIQUID SCINTILLATION ANALYSIS
AP5, REVISION 16; CP4, REVISION 3
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Tc-99 Concentrations^a (pCi/L)
1697W0123	U1-VC Sump	90 ± 20 ^b , 30

^aThe MDC is after the comma.

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

TABLE 5

**CONCENTRATIONS OF TOTAL RADIOSTRONTIUM
IN A WATER SAMPLE
BY LOW BACKGROUND BETA COUNTING
AP4, REVISION 13; CP3, REVISION 2
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations, TPUs, and MDCs^a (pCi/L)
1697W0123	U1-VC Sump	1,633 ± 74 ^b , 16

^aThe MDC is after the comma.

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

TABLE 6

**CONCENTRATIONS OF SELECTED
ALPHA EMITTING RADIONUCLIDES
IN A WATER SAMPLE
AP11, REVISION 3; CP2, REVISION 12
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations ^a (pCi/L)			
		Am-241	Cm-242	Cm-243/244	Np-237
1697W0123	U1-VC Sump	0.36 ± 0.63 ^b , 1.10	0.07 ± 0.32 , 0.69	0.22 ± 0.56 , 1.04	-0.38 ± 0.40 , 1.09
		Pu-238	Pu-239/240	U-234	U-238
		0.68 ± 0.76 , 1.22	0.08 ± 0.15 , 0.23	0.14 ± 0.28 , 0.53	0.14 ± 0.20 , 0.21

^aThe MDCs are after the comma.

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

TABLE 7

**CONCENTRATIONS OF PLUTONIUM-241
IN A WATER SAMPLE
BY LIQUID SCINTILLATION ANALYSIS
AP10, REVISION 2; CP4, REVISION 3
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations ^a (pCi/L)
1697W0123	U1-VC Sump	50 ± 120 ^b , 210

^aThe MDC is after the comma.

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

TABLE 8

**CONCENTRATIONS OF CARBON-14
IN A WATER SAMPLE
BY LIQUID SCINTILLATION ANALYSIS
AP9, REVISION 3; CP4, REVISION 3
INDIAN POINT POWER STATION
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations, TPUs, and MDCs ^a (pCi/L)
1697W0123	U1-VC Sump	900 ± 130 ^b , 20

^aThe MDC is after the comma.

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