

ORISE
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

August 1, 2007

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

**SUBJECT: REPORT FOR ANALYSES FOR SAMPLES FROM SET TWENTY-SIX
FROM THE INDIAN POINT POWER STATION, BUCHANAN, NEW YORK
[INSPECTION REPORT NO. 050-247/2007-003] [RFTA NO. 07-001]**

Dear Mr. Kottan:

The Oak Ridge Institute for Science and Education (ORISE) received set 26, consisting of 11 water samples, associated with the Indian Point Power Station on May 21, 2007. Sample analysis was initiated based on your previous direction for handling samples from this licensee and modified based on a phone conversation with John White on July 3, 2007 and an e-mail from Stacie Sakai on July 9, 2007. Sample identification and collection data for the samples addressed in this report are presented in Table 1. Gamma spectroscopy and tritium data are provided in Table 2 and Table 3, 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.

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

Sincerely,

Dale Condra

Dale Condra, Manager
Laboratory

RDC:WPI:bf

Enclosures

c: T. Carter, NRC/FSME/DWMEP 7J8
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Distribution approval and concurrence :	Initials
Technical Management Team Member	DR
Quality Manager	ATP

TABLE 1

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

ORISE Sample ID	NRC Region I Sample ID	Collection Date	Collection Time
1697W0154	MW-62-55'-(001)	5/10/2007	15:00
1697W0155	MW-62-73'-(001)	5/10/2007	11:35
1697W0156	MW-62-94'-(001)	5/10/2007	11:18
1697W0157	MW-62-140'-(001)	5/10/2007	10:22
1697W0158	MW-62-184'-(001)	5/10/2007	10:43
1697W0159	MW-63-52'-(001)	5/15/2007	11:48
1697W0160	MW-63-93'-(002)	5/15/2007	12:45
1697W0161	MW-63-114'-(001)	5/15/2007	13:10
1697W0162	MW-63-124'-(001)	5/15/2007	13:42
1697W0163	MW-63-164'-(001)	5/15/2007	11:38
1697W0164	MW-63-176'-(001)	5/15/2007	11:54

TABLE 2

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

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations, TPUs, and MDCs ^a (pCi/L)			
		Co-58	Co-60	Cs-134	Cs-137
1697W0154	MW-62-55'-(001)	0.1 ± 2.4 ^b , 4.1	0.7 ± 2.1 , 3.7	2.5 ± 2.2 , 3.8	-1.8 ± 3.6 , 4.1
1697W0155	MW-62-73'-(001)	0.4 ± 3.0 , 4.4	-0.9 ± 2.6 , 4.2	1.3 ± 2.8 , 4.2	1.9 ± 2.2 , 3.9
1697W0156	MW-62-94'-(001)	-1.1 ± 2.9 , 4.3	1.3 ± 2.3 , 4.1	0.1 ± 2.3 , 4.0	0.7 ± 2.3 , 3.7
1697W0157	MW-62-140'-(001)	0.9 ± 1.9 , 3.4	0.6 ± 2.0 , 3.1	1.5 ± 2.0 , 3.1	0.1 ± 1.6 , 2.9
1697W0158	MW-62-184'-(001)	-0.3 ± 2.8 , 4.6	-0.1 ± 2.5 , 4.3	-1.0 ± 2.6 , 4.3	2.1 ± 2.3 , 4.0
1697W0159	MW-63-52'-(001)	0.0 ^c ± 2.3 , 3.8	-0.1 ± 2.1 , 3.7	2.3 ± 2.3 , 4.0	-3.1 ± 3.6 , 4.0
1697W0160	MW-63-93'-(002)	-1.4 ± 2.5 , 4.1	2.1 ± 2.7 , 4.3	1.3 ± 2.5 , 4.3	-0.5 ± 2.1 , 3.6
1697W0161	MW-63-114'-(001)	0.6 ± 1.9 , 3.3	-0.3 ± 1.7 , 3.0	0.0 ± 1.8 , 3.1	-0.3 ± 1.7 , 2.9
1697W0162	MW-63-124'-(001)	1.6 ± 2.6 , 4.2	0.7 ± 2.2 , 3.9	0.8 ± 2.3 , 3.5	-4.1 ± 3.6 , 4.0
1697W0163	MW-63-164'-(001)	3.8 ± 2.9 , 4.8	1.2 ± 2.5 , 4.4	0.1 ± 3.0 , 4.3	0.7 ± 2.2 , 3.9
1697W0164	MW-63-176'-(001)	0.3 ± 1.8 , 3.0	-0.5 ± 1.7 , 2.9	0.9 ± 1.8 , 3.2	0.2 ± 1.7 , 2.9

^aThe MDC for each radionuclide is after the comma.

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

^cZero values are due to rounding.

TABLE 3

**CONCENTRATIONS OF TRITIUM
IN WATER SAMPLES
BY LIQUID SCINTILLATION ANALYSIS
AP2, REVISION 16, 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)
1697W0154	MW-62-55'-(001)	340 ± 180 ^b , 280
1697W0155	MW-62-73'-(001)	500 ± 180 , 280
1697W0156	MW-62-94'-(001)	430 ± 180 , 280
1697W0157	MW-62-140'-(001)	410 ± 180 , 280
1697W0158	MW-62-184'-(001)	430 ± 180 , 280
1697W0159	MW-63-52'-(001)	390 ± 180 , 280
1697W0160	MW-63-93'-(002)	270 ± 170 , 280
1697W0161	MW-63-114'-(001)	390 ± 180 , 280
1697W0162	MW-63-124'-(001)	630 ± 190 , 280
1697W0163	MW-63-164'-(001)	590 ± 190 , 280
1697W0164	MW-63-176'-(001)	680 ± 190 , 280

^aThe MDCs are after the comma.

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