

August 31, 2007

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

**SUBJECT: REPORT FOR ANALYSES OF 18 FISH SAMPLES FROM SET TWO FROM  
THE INDIAN POINT POWER STATION, BUCHANAN, NEW YORK  
[INSPECTION REPORT NO. 050-247/2007-003] [RFTA NO. 07-004]**

Dear Mr. Kottan:

The Oak Ridge Institute for Science and Education (ORISE) received set two, consisting of 18 fish samples associated with the Indian Point Power Station on July 20, 2007. Sample analysis was initiated based on the information in an e-mail from Ted Carter date July 19, 2007. Sample identification and collection data for the samples addressed in this report are presented in Table 1. Gamma spectroscopy and total radiostrontium data are provided in Tables 2 and 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, Manager  
Laboratory

RDC:WPI:bf

Enclosures

c:	T. Carter, NRC/FSME/DWMEP 7J8	E. Abelquist, ORISE
	E. Knox-Davin, NRC/FSME/TWFFN 8A23	S. Roberts, ORISE
	J. White, NRC Region I	File 1748

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

Voice: 865.241.3242

Fax: 865.241.3248

E-mail: Dale.Condra @orau.org

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
1748M0001	Region 11 Carp	6/15/07, 6/19/07	0845, 1400
1748M0002	Region 4 Crabs	6/6/07, 6/13/07, 6/14/07, 6/18/07, 6/19/07	1544, 1438, 0745, 0950, 0730, 0740, 0809, 1600
1748M0003	Region 4 Am. Eel	6/13/07, 6/14/07, 6/18/07, 6/19/07	1430, 0756, 0950, 0815, 1600
1748M0004	Region 7 Catfish	6/7/07, 6/13/07	0930, 0959, 1100, 1318, 1420, 1303
1748M0005	Region 11 White Perch	6/15/07, 6/19/07, 6/12/07	0824, 1400, 1510, 1610, 15 , 1030
1748M0006	Region 11 Catfish	6/12/07, 6/15/07, 6/19/07	1230, 0845, 1510, 0824, 0922, 1030
1748M0007	Region 7 Carp	6/7/07	0959, 1230, 0930
1748M0008	Region 7 Striped Bass	6/14/07	0910
1748M0009	Region 7 Centrarchodae	6/13/07, 6/14/07, 6/18/07, 6/19/07, 6/21/07	1303, 1006, 1155, 1331, 1230
1748M0010	Region 4 Centrarchodae	6/6/07, 6/8/07, 6/14/07, 6/11/07, 6/19/07, 6/21/07	1519, 1544, 0822, 0851, 0916, 0730, 1522, 0950, 0730, 1600, 0800
1748M0011	Region 11 Centrarchodae	6/15/07, 6/19/07	0845, 1400, 1610
1748M0012	Region 7 Eel	6/7/07, 6/14/07, 6/18/07, 6/19/07	0959, 1100, 0940, 1230, 1331
1748M0013	Region 4 White Perch	6/6/07, 6/8/07, 6/14/07, 6/18/07, 6/19/07	1519, 1544, 0822, 0916, 0851, 0730, 0950, 0730, 1600
1748M0014	Region 7 White Perch	6/7/07, 6/13/07, 6/18/07, 6/19/07, 6/20/07	1100, 1201, 1348, 1303, 1155, 1331, 1230, 0959
1748M0015	Region 4 Catfish	6/8/07, 6/18/07	0822, 0916, 0950
1748M0016	Region 4 Striped Bass	6/7/07, 6/8/07	1543, 0916
1748M0017	Region 11 Eel	6/15/07	0902, 1104, 0824
1748M0018	Region 4 Carp	6/8/07, 6/14/07	0822, 0730

TABLE 2

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

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations <sup>a</sup> (pCi/g wet weight)			
		Co-58	Co-60	Cs-134	Cs-137
1748M0001	Region 11 Carp	0.00 <sup>b</sup> ± 0.01 <sup>c</sup> , 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.01, 0.01
1748M0002	Region 4 Crabs	0.00 ± 0.01, 0.02	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01
1748M0003	Region 4 Am. Eel	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.01, 0.01	0.01 ± 0.01, 0.01
1748M0004	Region 7 Catfish	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.01 ± 0.01, 0.01
1748M0005	Region 11 White Perch	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01
1748M0006	Region 11 Catfish	-0.01 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01	0.01 ± 0.01, 0.01
1748M0007	Region 7 Carp	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01
1748M0008	Region 7 Striped Bass	0.00 ± 0.01, 0.01	-0.01 ± 0.01, 0.01	0.01 ± 0.01, 0.01	0.01 ± 0.01, 0.01
1748M0009	Region 7 Centrarchodae	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.01, 0.01
1748M0010	Region 4 Centrarchodae	-0.01 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01
1748M0011	Region 11 Centrarchodae	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01
1748M0012	Region 7 Eel	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01
1748M0013	Region 4 White Perch	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.01 ± 0.01, 0.01
1748M0014	Region 7 White Perch	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01
1748M0015	Region 4 Catfish	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.01 ± 0.00, 0.01	0.00 ± 0.00, 0.01
1748M0016	Region 4 Striped Bass	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01	0.01 ± 0.00, 0.01
1748M0017	Region 11 Eel	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01
1748M0018	Region 4 Carp	0.00 ± 0.01, 0.01	0.00 ± 0.01, 0.01	0.00 ± 0.00, 0.01	0.00 ± 0.00, 0.01

<sup>a</sup>The MDCs are after the comma.

<sup>b</sup>Zero values are due to rounding.

<sup>c</sup>Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

TABLE 3

**CONCENTRATIONS OF TOTAL RADIOSTRONTIUM  
IN FISH SAMPLES  
BY LOW BACKGROUND BETA COUNTING  
AP4, REVISION 14; CP3, REVISION 2  
INDIAN POINT POWER STATION  
BUCHANAN, NEW YORK**

ORISE Sample ID	NRC Region I Sample ID	Radionuclide Concentrations, TPUs, and MDCs <sup>a</sup> (pCi/g wet weight)
1748M0001	Region 11 Carp	-0.001 ± 0.003 <sup>b</sup> , 0.005
1748M0002	Region 4 Crabs	0.003 ± 0.003, 0.005
1748M0003	Region 4 Am. Eel	0.001 ± 0.003, 0.005
1748M0004	Region 7 Catfish	-0.001 ± 0.003, 0.005
1748M0005	Region 11 White Perch	0.003 ± 0.003, 0.006
1748M0006	Region 11 Catfish	0.002 ± 0.002, 0.004
1748M0007	Region 7 Carp	0.003 ± 0.002, 0.004
1748M0008	Region 7 Striped Bass	0.000 <sup>c</sup> ± 0.002, 0.004
1748M0009	Region 7 Centrarchodae	0.001 ± 0.003, 0.006
1748M0010	Region 4 Centrarchodae	0.001 ± 0.002, 0.004
1748M0011	Region 11 Centrarchodae	0.001 ± 0.003, 0.005
1748M0012	Region 7 Eel	0.001 ± 0.003, 0.005
1748M0013	Region 4 White Perch	0.001 ± 0.003, 0.005
1748M0014	Region 7 White Perch	0.000 ± 0.002, 0.004
1748M0015	Region 4 Catfish	0.000 ± 0.003, 0.004
1748M0016	Region 4 Striped Bass	-0.001 ± 0.002, 0.004
1748M0017	Region 11 Eel	0.000 ± 0.003, 0.005
1748M0018	Region 4 Carp	0.000 ± 0.002, 0.004

<sup>a</sup>The MDCs are after the comma.

<sup>b</sup>Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

<sup>c</sup>Zero values are due to rounding.