ORISE
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

April 12, 2007

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 SAMPLES FROM SET SEVENTEEN, 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 17, consisting of 12 water samples, associated with the Indian Point Power Station on December 4, 2006. Sample analysis was initiated based on your previous direction for handling samples from this licensee. Sample identification and collection data for the samples 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. Additional reports will follow after the completion of the requested analyses.

ORISE has removed the Ni-59 data due to problems with the calculation associated with the concentration of this radionuclide. ORISE is discontinuing the reporting of Ni-59 data until this problem can be resolved.

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:km

Enclosures

c: T. Carter, NRC/FSME/DWMEP 7J18
E. Knox-Davin, NRC/FSME/TWFN 8A23
M. Roberts, NRC Region I
File 1697

E. Abelquist, ORISE
S. Kirk, ORISE
J. White, NRC Region I

Distribution approval and concurrence :	Initials
Technical Management Team Member	JK
Quality Manager	GTP

Voice: 865.241.3242 Fax: 865.241.3248 E-mail: Dale.Condra @orau.org

P. O. Box 117
Oak Ridge, TN 37831

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
1697W0103[a]	Future LP Hotwell Sump	11/15/2006	NDP[b]
1697M0012[c]	1697W0103 Filter	11/15/2006	NDP
1697W0104	Sooting Settling Pit	11/15/2006	NDP
1697M0013	1697W0104 Filter	11/15/2006	NDP
1697W0106	CSB Sewage Pit	11/15/2006	NDP
1697M0014	1697W0106 Filter	11/15/2006	NDP
1697W0107	U-1 West Pool	11/15/2006	NDP
1697M0015	1697W0107 Filter	11/15/2006	NDP
1697W0108	MW-48-23-(009)	11/22/2006	9:23
1697M0016	1697W0108 Filter	11/22/2006	9:23
1697W0109	MW-48-38-(009)	11/22/2006	9:34
1697M0017	1697W0109 Filter	11/22/2006	9:34
1697W0110	MW-38-(018)	11/22/2006	10:38
1697M0018	1697W0110 Filter	11/22/2006	10:38
1697W0111	MW-60-(001)	11/30/2006	10:38
1697M0019	1697W0111 Filter	11/30/2006	10:38
1697W0112	MW-62-(001)	11/30/2006	13:35
1697M0020	1697W0112 Filter	11/30/2006	13:35
1697W0113	LAF-001-(004)	12/4/2006	11:34
1697M0021	1697W0113 Filter	12/4/2006	11:34
1697W0114	LAF-002-(004)	12/4/2006	13:38
1697M0022	1697W0114 Filter	12/4/2006	13:38
1697W0115	LAF-003-(004)	12/4/2006	10:02
1697M0023	1697W0115 Filter	12/4/2006	10:02

[a]The W in the ORISE sample identification represents a water matrix.

[b]No data provided.

[c]The M in the ORISE sample identification represents the filtered fraction of the preceding water sample.

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[a,b] (pCi/L)			
		Co-58	Co-60	Cs-134	Cs-137
1697W0103	Future LP Hotwell Sump	-2.9 ± 2.5[c]	2.3 ± 2.3	0.1 ± 2.3	0.1 ± 5.3
1697W0104	Sooting Settling Pit	-0.1 ± 2.9	-0.5 ± 2.2	-1.6 ± 2.2	1.2 ± 2.1
1697W0106	CSB Sewage Pit	0.1 ± 2.8	-2.2 ± 2.7	-0.5 ± 2.4	196.5 ± 9.7
1697W0107	U-1 West Pool	-10 ± 20	309 ± 68	2 ± 19	120,200 ± 3,800
1697W0108	MW-48-23-(009)	-1.1 ± 1.9	1.3 ± 1.6	0.3 ± 1.7	0.4 ± 1.8
1697W0109	MW-48-38-(009)	-0.2 ± 2.4	2.4 ± 2.1	-0.1 ± 2.5	-1.8 ± 4.3
1697W0110	MW-38-(018)	-0.5 ± 2.6	1.9 ± 2.3	-1.2 ± 2.7	4.9 ± 2.8
1697W0111	MW-60-(001)	-0.9 ± 2.1	-1.2 ± 1.7	0.6 ± 1.8	1.3 ± 1.7
1697W0112	MW-62-(001)	0.8 ± 2.6	0.3 ± 2.5	1.5 ± 2.5	0.0[d] ± 3.4
1697W0113	LAF-001-(004)	-2.6 ± 2.5	0.5 ± 2.5	0.0 ± 2.3	-0.6 ± 2.2
1697W0114	LAF-002-(004)	-0.3 ± 2.1	0.5 ± 2.0	0.6 ± 2.4	-2.2 ± 4.2
1697W0115	LAF-003-(004)	0.6 ± 1.7	2.0 ± 1.6	0.6 ± 1.7	-0.2 ± 1.6

[a]The range of MDCs for the selected radionuclide for all samples except W0107 is 2.7 pCi/L to 4.7 pCi/L.

[b]The range of MDCs for the selected radionuclide for sample W0107 is 34 pCi/L to 180 pCi/L.

[c]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

[d]Zero values are due to rouding.

TABLE 3

CONCENTRATIONS OF HARD TO DETECT BETA EMITTING RADIONUCLIDES IN WATER SAMPLES 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]
1697W0103	Future LP Hotwell Sump	-4 ± 18[e] , 31	-0.2 ± 6.3 , 10.7	730 ± 260 , 390
1697W0104	Sooting Settling Pit	8 ± 19 , 31	-1.9 ± 6.2 , 10.7	460 ± 250 , 390
1697W0106	CSB Sewage Pit	-6 ± 18 , 31	4.3 ± 6.4 , 10.7	6,910 ± 540 , 390
1697W0107	U-1 West Pool	43 ± 38 , 63	4,600 ± 260 , 30	287,000 ± 10,000 , 390
1697W0108	MW-48-23-(009)	43 ± 20 , 31	-0.7 ± 6.3 , 10.7	190 ± 230 , 390
1697W0109	MW-48-38-(009)	-3 ± 18 , 31	4.1 ± 6.4 , 10.7	80 ± 230 , 390
1697W0110	MW-38-(018)	12 ± 19 , 31	1.5 ± 6.3 , 10.7	40 ± 220 , 390
1697W0111	MW-60-(001)	1 ± 18 , 31	6.6 ± 6.4 , 10.7	180 ± 230 , 390
1697W0112	MW-62-(001)	-8 ± 18 , 31	3.8 ± 6.4 , 10.7	620 ± 260 , 390
1697W0113	LAF-001-(004)	0[f] ± 18 , 31	-1.8 ± 6.2 , 10.7	-50 ± 220 , 390
1697W0114	LAF-002-(004)	5 ± 18 , 31	2.7 ± 6.3 , 10.7	-80 ± 220 , 390
1697W0115	LAF-003-(004)	-2 ± 18 , 31	-1.1 ± 6.3 , 10.7	130 ± 230 , 390

[a]The MDCs for each radionuclide are after the comma.

[b]Fe-55 analyzed using procedure AP13, Revision 4.

[c]Ni-63 analyzed using procedure AP17, Revision 0.

[d]H-3 analyzed using procedure AP2, Revision 15.

[e]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

[f]Zero value is due to rounding.

TABLE 4

CONCENTRATIONS OF TECHNETIUM-99 IN WATER SAMPLES 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	Radionuclide Concentrations[a] (pCi/L)
1697W0103	Future LP Hotwell Sump	6.8 ± 9.1[b] , 15.3
1697W0104	Sooting Settling Pit	12.6 ± 9.3 , 15.3
1697W0106	CSB Sewage Pit	7.8 ± 9.1 , 15.3
1697W0107	U-1 West Pool	29.5 ± 9.8 , 15.3
1697W0108	MW-48-23-(009)	4.7 ± 9.0 , 15.3
1697W0109	MW-48-38-(009)	7.1 ± 9.1 , 15.3
1697W0110	MW-38-(018)	5.9 ± 9.0 , 15.3
1697W0111	MW-60-(001)	8.4 ± 9.1 , 15.3
1697W0112	MW-62-(001)	3.9 ± 9.0 , 15.3
1697W0113	LAF-001-(004)	1.6 ± 8.9 , 15.3
1697W0114	LAF-002-(004)	8.9 ± 9.1 , 15.3
1697W0115	LAF-003-(004)	10.2 ± 9.2 , 15.3

[a]The MDCs are after the comma.

[b]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

TABLE 5

CONCENTRATIONS OF TOTAL RADIOSTRONTIUM IN WATER SAMPLES 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)
1697W0103	Future LP Hotwell Sump	1.68 ± 0.40[b] , 0.56
1697W0104	Sooting Settling Pit	0.02 ± 0.31 , 0.55
1697W0106	CSB Sewage Pit	2.44 ± 0.42 , 0.53
1697W0107	U-1 West Pool	1,775 ± 54 , 4
1697W0108	MW-48-23-(009)	0.13 ± 0.33 , 0.58
1697W0109	MW-48-38-(009)	-0.10 ± 0.32 , 0.57
1697W0110	MW-38-(018)	0.19 ± 0.50 , 0.87
1697W0111	MW-60-(001)	0.41 ± 0.54 , 0.92
1697W0112	MW-62-(001)	0.70 ± 0.54 , 0.87
1697W0113	LAF-001-(004)	0.32 ± 0.52 , 0.89
1697W0114	LAF-002-(004)	0.36 ± 0.48 , 0.82
1697W0115	LAF-003-(004)	0.13 ± 0.48 , 0.85

[a]The MDCs are after the comma.

[b]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

TABLE 6

CONCENTRATIONS OF SELECTED ALPHA EMITTING RADIONUCLIDES IN SUSPENDED AND DISSOLVED FRACTIONS OF WATER SAMPLES 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/g of sediment in 100 mL or pCi/L for water)			
		Am-241	Cm-242	Cm-243/244	Np-237
1697W0103	Future LP Hotwell Sump	0.11 ± 0.20[b] , 0.35	0.05 ± 0.12 , 0.22	-0.10 ± 0.14 , 0.32	0.00[c] ± 0.09 , 0.20
1697M0012	1697W0103 Filter	0.01 ± 0.03 , 0.04	0.00 ± 0.01 , 0.03	0.01 ± 0.02 , 0.04	0.01 ± 0.01 , 0.02
1697W0104	Sooting Settling Pit	0.25 ± 0.25 , 0.40	-0.04 ± 0.14 , 0.29	0.05 ± 0.19 , 0.34	0.08 ± 0.08 , 0.06
1697M0013	1697W0104 Filter	0.01 ± 0.03 , 0.05	0.01 ± 0.01 , 0.02	0.01 ± 0.02 , 0.04	-0.04 ± 0.02 , 0.05
1697W0106	CSB Sewage Pit	-0.04 ± 0.10 , 0.24	0.06 ± 0.09 , 0.15	-0.04 ± 0.06 , 0.19	0.02 ± 0.04 , 0.06
1697M0014	1697W0106 Filter	0.02 ± 0.01 , 0.01	0.01 ± 0.01 , 0.02	-0.002[d] ± 0.004 , 0.015	-0.02 ± 0.02 , 0.05
1697W0107	U-1 West Pool	1.11 ± 0.97 , 1.50	0.07 ± 0.46 , 0.93	0.14 ± 0.65 , 1.23	0.29 ± 0.46 , 0.81
1697M0015	1697W0107 Filter	0.05 ± 0.03 , 0.04	0.00 ± 0.01 , 0.02	0.02 ± 0.02 , 0.03	0.002 ± 0.004 , 0.006
1697W0108	MW-48-23-(009)	0.11 ± 0.23 , 0.40	-0.02 ± 0.07 , 0.18	0.03 ± 0.16 , 0.31	-0.02 ± 0.08 , 0.19
1697M0016	1697W0108 Filter	0.01 ± 0.02 , 0.04	0.01 ± 0.01 , 0.01	0.00 ± 0.02 , 0.04	0.00 ± 0.01 , 0.03
1697W0109	MW-48-38-(009)	0.25 ± 0.22 , 0.35	0.02 ± 0.06 , 0.13	0.02 ± 0.17 , 0.32	0.06 ± 0.08 , 0.14
1697M0017	1697W0109 Filter	0.03 ± 0.03 , 0.04	-0.01 ± 0.01 , 0.03	-0.01 ± 0.02 , 0.04	0.00 ± 0.01 , 0.02
1697W0110	MW-38-(018)	0.39 ± 0.24 , 0.32	-0.02 ± 0.09 , 0.22	-0.06 ± 0.20 , 0.41	-0.19 ± 0.14 , 0.37
1697M0018	1697W0110 Filter	0.01 ± 0.02 , 0.04	0.02 ± 0.02 , 0.02	0.01 ± 0.02 , 0.04	0.00 ± 0.01 , 0.02
1697W0111	MW-60-(001)	0.18 ± 0.21 , 0.35	0.09 ± 0.14 , 0.24	0.07 ± 0.20 , 0.36	0.04 ± 0.10 , 0.20
1697M0019	1697W0111 Filter	0.01 ± 0.02 , 0.04	0.00 ± 0.01 , 0.02	0.01 ± 0.02 , 0.04	0.00 ± 0.01 , 0.02
1697W0112	MW-62-(001)	0.14 ± 0.15 , 0.24	0.02 ± 0.08 , 0.17	0.07 ± 0.14 , 0.26	0.09 ± 0.10 , 0.14
1697M0020	1697W0112 Filter	0.02 ± 0.01 , 0.01	0.01 ± 0.01 , 0.01	0.00 ± 0.01 , 0.01	0.00 ± 0.01 , 0.01
1697W0113	LAF-001-(004)	0.00 ± 0.19 , 0.36	0.09 ± 0.11 , 0.17	0.09 ± 0.17 , 0.29	-0.10 ± 0.19 , 0.41
1697M0021	1697W0113 Filter	0.01 ± 0.02 , 0.04	0.01 ± 0.01 , 0.03	-0.01 ± 0.02 , 0.04	0.01 ± 0.01 , 0.02
1697W0114	LAF-002-(004)	0.08 ± 0.25 , 0.45	-0.02 ± 0.15 , 0.31	0.02 ± 0.21 , 0.39	-0.10 ± 0.21 , 0.44
1697M0022	1697W0114 Filter	-0.01 ± 0.02 , 0.05	0.01 ± 0.01 , 0.01	0.02 ± 0.02 , 0.04	0.00 ± 0.01 , 0.03
1697W0115	LAF-003-(004)	0.10 ± 0.11 , 0.15	0.10 ± 0.09 , 0.06	-0.06 ± 0.09 , 0.24	-0.35 ± 0.20 , 0.51
1697M0023	1697W0115 Filter	-0.01 ± 0.02 , 0.05	0.00 ± 0.01 , 0.03	0.01 ± 0.02 , 0.04	0.00 ± 0.02 , 0.03

TABLE 6 (Continued)

CONCENTRATIONS OF SELECTED ALPHA EMITTING RADIONUCLIDES IN SUSPENDED AND DISSOLVED FRACTIONS OF WATER SAMPLES 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/g of sediment in 100 mL or pCi/L for water)			
		Pu-238	Pu-239/240	U-234	U-238
1697W0103	Future LP Hotwell Sump	0.07 ± 0.19 , 0.35	0.02 ± 0.09 , 0.20	0.09 ± 0.17 , 0.30	0.13 ± 0.11 , 0.14
1697M0012	1697W0103 Filter	0.03 ± 0.02 , 0.03	0.01 ± 0.01 , 0.02	0.01 ± 0.01 , 0.01	0.01 ± 0.01 , 0.02
1697W0104	Sooting Settling Pit	0.11 ± 0.23 , 0.40	0.09 ± 0.09 , 0.06	0.00 ± 0.18 , 0.35	0.05 ± 0.06 , 0.06
1697M0013	1697W0104 Filter	0.00 ± 0.01 , 0.02	0.00 ± 0.01 , 0.02	0.01 ± 0.01 , 0.01	0.00 ± 0.01 , 0.01
1697W0106	CSB Sewage Pit	0.04 ± 0.14 , 0.28	0.08 ± 0.08 , 0.06	-0.07 ± 0.13 , 0.32	0.00 ± 0.11 , 0.24
1697M0014	1697W0106 Filter	-0.01 ± 0.02 , 0.04	0.00 ± 0.01 , 0.01	0.00 ± 0.01 , 0.02	0.01 ± 0.01 , 0.01
1697W0107	U-1 West Pool	1.3 ± 1.0 , 1.5	0.66 ± 0.57 , 0.81	0.13 ± 0.25 , 0.48	0.00 ± 0.25 , 0.59
1697M0015	1697W0107 Filter	0.00 ± 0.02 , 0.04	0.01 ± 0.01 , 0.02	0.00 ± 0.01 , 0.02	0.01 ± 0.01 , 0.01
1697W0108	MW-48-23-(009)	0.12 ± 0.24 , 0.41	0.03 ± 0.05 , 0.05	0.17 ± 0.14 , 0.16	0.13 ± 0.11 , 0.06
1697M0016	1697W0108 Filter	0.00 ± 0.02 , 0.04	0.02 ± 0.01 , 0.02	0.00 ± 0.02 , 0.03	0.02 ± 0.02 , 0.03
1697W0109	MW-48-38-(009)	0.17 ± 0.24 , 0.40	0.07 ± 0.09 , 0.14	10.8 ± 1.2 , 0.3	3.63 ± 0.61 , 0.19
1697M0017	1697W0109 Filter	0.01 ± 0.02 , 0.04	0.01 ± 0.01 , 0.02	0.40 ± 0.06 , 0.02	0.33 ± 0.06 , 0.02
1697W0110	MW-38-(018)	-0.08 ± 0.21 , 0.44	0.06 ± 0.07 , 0.06	0.05 ± 0.07 , 0.07	0.12 ± 0.10 , 0.07
1697M0018	1697W0110 Filter	0.00 ± 0.02 , 0.05	0.01 ± 0.01 , 0.01	0.02 ± 0.01 , 0.01	0.00 ± 0.01 , 0.02
1697W0111	MW-60-(001)	0.10 ± 0.24 , 0.42	0.02 ± 0.07 , 0.16	16.9 ± 1.8 , 0.4	10.2 ± 1.2 , 0.1
1697M0019	1697W0111 Filter	0.02 ± 0.01 , 0.02	0.002 ± 0.004 , 0.006	0.02 ± 0.01 , 0.02	0.00 ± 0.01 , 0.02
1697W0112	MW-62-(001)	0.11 ± 0.17 , 0.29	0.02 ± 0.08 , 0.17	13.6 ± 1.4 , 0.2	5.86 ± 0.77 , 0.05
1697M0020	1697W0112 Filter	0.01 ± 0.02 , 0.03	0.00 ± 0.01 , 0.02	0.02 ± 0.02 , 0.02	0.02 ± 0.01 , 0.01
1697W0113	LAF-001-(004)	-0.10 ± 0.24 , 0.48	0.16 ± 0.12 , 0.06	2.88 ± 0.54 , 0.06	2.68 ± 0.51 , 0.06
1697M0021	1697W0113 Filter	0.02 ± 0.02 , 0.02	0.00 ± 0.01 , 0.02	0.00 ± 0.01 , 0.02	0.01 ± 0.01 , 0.02
1697W0114	LAF-002-(004)	0.14 ± 0.15 , 0.22	0.04 ± 0.08 , 0.16	24.6 ± 2.4 , 0.4	16.2 ± 1.7 , 0.3
1697M0022	1697W0114 Filter	0.01 ± 0.02 , 0.03	0.01 ± 0.01 , 0.02	0.02 ± 0.01 , 0.01	0.02 ± 0.01 , 0.01
1697W0115	LAF-003-(004)	0.12 ± 0.17 , 0.29	0.05 ± 0.09 , 0.18	0.98 ± 0.29 , 0.20	0.68 ± 0.24 , 0.18
1697M0023	1697W0115 Filter	0.01 ± 0.02 , 0.03	0.00 ± 0.01 , 0.02	0.01 ± 0.01 , 0.02	-0.02 ± 0.01 , 0.04

[a]The MDCs are after the comma.

[b]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

[c]Zero values are due to rounding.

[d]Significant figures expanded to avoid reporting a TPU of zero at the request of the inspector.

TABLE 7

CONCENTRATIONS OF PLUTONIUM-241 IN SUSPENDED AND DISSOLVED FRACTIONS OF WATER SAMPLES 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/g of sediment in 100 mL or pCi/L for water)				
1697W0103	Future LP Hotwell Sump	-8	±	33[b]	,	57
1697M0012	1697W0103 Filter	-1.6	±	3.5	,	6.1
1697W0104	Sooting Settling Pit	1	±	32	,	54
1697M0013	1697W0104 Filter	-1.7	±	3.5	,	6.1
1697W0106	CSB Sewage Pit	3	±	33	,	57
1697M0014	1697W0106 Filter	-2.8	±	3.4	,	5.9
1697W0107	U-1 West Pool	70	±	130	,	210
1697M0015	1697W0107 Filter	-2.6	±	3.3	,	5.7
1697W0108	MW-48-23-(009)	6	±	34	,	59
1697M0016	1697W0108 Filter	1.0	±	3.7	,	6.3
1697W0109	MW-48-38-(009)	17	±	32	,	54
1697M0017	1697W0109 Filter	0.7	±	3.6	,	6.2
1697W0110	MW-38-(018)	20	±	35	,	58
1697M0018	1697W0110 Filter	2.0	±	3.5	,	5.9
1697W0111	MW-60-(001)	3	±	35	,	60
1697M0019	1697W0111 Filter	0.4	±	3.3	,	5.7
1697W0112	MW-62-(001)	-9	±	30	,	52
1697M0020	1697W0112 Filter	-1.6	±	3.3	,	5.8
1697W0113	LAF-001-(004)	14	±	30	,	51
1697M0021	1697W0113 Filter	-1.7	±	3.3	,	5.7
1697W0114	LAF-002-(004)	-1	±	31	,	54
1697M0022	1697W0114 Filter	1.3	±	3.4	,	5.7
1697W0115	LAF-003-(004)	3	±	30	,	52
1697M0023	1697W0115 Filter	0.4	±	3.5	,	6.0

[a]The MDCs are after the comma.

[b]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

TABLE 8

CONCENTRATIONS OF CARBON-14 IN WATER SAMPLES 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)
1697W0103	Future LP Hotwell Sump	11 ± 11[b] , 18
1697W0104	Sooting Settling Pit	10.2 ± 9.6 , 16.0
1697W0106	CSB Sewage Pit	15.5 ± 9.9 , 16.0
1697W0107	U-1 West Pool	9.9 ± 9.6 , 16.0
1697W0108	MW-48-23-(009)	9.3 ± 9.6 , 16.0
1697W0109	MW-48-38-(009)	1.3 ± 9.4 , 16.0
1697W0110	MW-38-(018)	5.0 ± 9.5 , 16.0
1697W0111	MW-60-(001)	12.4 ± 9.7 , 16.0
1697W0112	MW-62-(001)	0.7 ± 9.4 , 16.0
1697W0113	LAF-001-(004)	7.9 ± 9.6 , 16.0
1697W0114	LAF-002-(004)	3.7 ± 9.4 , 16.0
1697W0115	LAF-003-(004)	5.0 ± 9.5 , 16.0

[a]MDCs are after the comma.

[b]Uncertainties represent the 95% confidence level, based on total propagated uncertainties.