John D. O'Toole
Vice President

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, NY 10003
Telephone (212) 460-2533

September 10, 1984

Re: Indian Point Unit Nos. 1,2 and 3
Docket Nos. 50-03, 50-247 and 50-286

Dr. Thomas E. Murley
Regional Administrator - Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pa. 19406

Dear Dr. Murley:

Attached please find the errata sheets and replacement tables for Appendix D to the Indian Point Site 1983 Annual Radiological Environmental Operating Report. This report was submitted April 30, 1984 in accordance with Appendix B of the Environmental Technical Specifications Requirements (ETSR) to facility licenses DPR-5, DPR-26 and DPR-64 for Indian Point Unit Nos. 1, 2 and 3, respectively.

In the preparation of the 1983 Report EPA guidance on upgrading environmental radiation data was followed. (EPA 520/1-80-012, "Upgrading Environmental Radiation Data" - August 1980). As a result of both in-house and consultant post-submittal review, we found that footnote (b) to Table 5.6-1 of Appendix B to the ETSR asked for a specific calculational methodology different from that used in the 1983 Report. To be consistent with the footnote we returned to the original calculational methodology used in years prior to 1983. Specifically, mean and range values would again be based upon detectable measurements, only, whereas in the 1983 Report minimum detectable concentrations (MDCs) were handled as real values for statistical purposes, only, and were not actual detectable measurements.

A review of the revised tables indicates that there is no impact resulting from the new calculational methodology, and discussions of the data contained in the April 30, 1984 submittal remain unchanged and applicable.

Should you have any questions please contact me.

Very truly yours,

John D. O'Toole

attach.

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PDR ADOCK 05000003
R PDR

IE25

cc: Document Control Desk (18 copies)
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. Leroy W. Sinclair, President
New York Power Authority
123 Main Street - 12th Floor
White Plains, New York 10601

Office of Senior Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 38
Buchanan, New York 10511

Office of Senior Resident Inspector
Indian Point Unit 3
U. S. Nuclear Regulatory Commission
P. O. Box 66
Buchanan, New York 10511

Table #	Detected Nuclide	All Indicator Samples		Location with Highest Mean		
		Mean	Range	Station	Mean	Range
D-1	Co-60 was:	4	3-6	9	4	3-5
	Changed to:	4	-	10	4	-
	Cs-137 was:	4	3-514	10	4	3-514
	Changed to:	5	-	10	5	-
D-2	Be-7 was:	275	913	17	500	500
	Changed to:	575	347-913	54	913	-
	K-40 was:	2470	300-15400			
	Changed to:	2560	1010-15400			
	Mn-54 was:	83	10-1620	15	820	20-1620
	Changed to:	1620	-	15	1620	-
	Co-60 was:	35	10-141	22	258	20-141
	Changed to:	71	30-169	22	92	43-144
	Cs-137 was:	86	20-266	49	193	40-266
	Changed to:	109	22-266	49	266	-
	Ra-266 was:	456	300-700	49	550	500-600
	Changed to:	623	-	22	623	-
	Th-228 was:	85	30-700	49	472	243-700
	Changed to:	167	92-243	49	243	-
D-3	Co-60 was:	184	10-970			
	Changed to:	300	55-970			
	Cs-134 was:	68	10-170	49	100	
	Changed to:	117	66-170	16	170	
	Ra-226 was:	1430	20-3270			
	Changed to:	1800	656-3270			
	Th-228 was:	930	20-1730			
	Changed to:	977	233-1730			
D-4	Be-7 was:	467	100-1120	50	860	600-1120
	Changed to:	1120	-	50	1120	-
	Co-60 was:	66	10-500	50	83	50-116
	Changed to:	85	54-116	50	116	-
	Cs-134 was:	47	20-90	49	70	50-90
	Changed to:	24	-	49	24	-
	Ra-226 was:	1030	300-3270			
	Changed to:	1880	609-3270			

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Table #	Detected Nuclide	All Indicator Samples		Location with Highest Mean		
		Mean	Range	Station	Mean	Range
D-6	Co-58 was:	188	6-2150	25	188	6-2150
	Changed to:	-	-	-	-	-
	Cs-137 was:	39	20-112	25	39	20-112
	Changed to:	43	20-112	25	43	20-112
D-7	Be-7 was:	43	20-77	29	51	40-77
	Changed to:	64	39-77	29	62	39-77
	Ra-226 was:	75	40-100	38	81	50-100
	Changed to:	94	-	24	94	-
	H-3 was:	209	70-1150			
	Changed to:	242	70-1150			
D-8	Cs-137 was:	4	3-6	26	4	3-5
	Changed to:	5	-	8	5	-
	H-3 was:	119	20-350			
	Changed to:	122	20-350			
D-9	Be-7 was:	0.15	0.01-0.7			
	Changed to:	0.15	0.02-0.34			
	K-40 was:	0.12	0.003-0.7	03	0.035	0.05-0.3
	Changed to:	0.11	0.03-0.2	04	0.17	-
	Cs-137 was:	0.006	0.002-0.02	38	0.005	0.002-0.01
	Changed to:	0.006	0.004 - 0.007	05	0.007	-
	Gr-B was:	0.015	0.004 - 0.027	03	0.02	0.004-0.03
	Changed to:	0.015	0.005 - 0.027	03	0.02	0.006-0.03
D-10	K-40 was:	0.03	0.02-0.04	03	0.04	0.01-0.06
	Changed to:	0.03	0.01-0.05	03	0.04	-
	Cs-137 was:	0.002	0.001 - 0.003	43	0.003	0.001-0.003
	Changed to:	0.003	0.001 - 0.004	22	0.004	-
D-11	SR-89 was:	$7.4E^{-4}$	0.2-2E-3	22	1.1E-3	0.3-2E-3
	Changed to:	-	-	-	-	-
	SR-90 was:	1.2E-4	0.05-2E-3	05	2.7E-4	0.9-8E-4
	Changed to:	0.9E-5	0.08-0.1	29	-	-

Table #	Detected Nuclide	All Indicator Samples		Location with Highest Mean		
		Mean	Range	Station	Mean	Range
D-12	H-3 was:	135	57-310	11	172	120-310
	Changed to:	146	57-310	11	188	66-310
D-13	Cs-137 was:	4.2	3-10.9	18	4.7	3-10.9
	Changed to:	7.6	4.3-10.9	18	10.9	-
D-15	Cs-134 was:	43	20-88			
	Changed to:	88	-			
D-16	Cs-137 was:	5	3-6.23	55	5	3-6.23
	Changed to:	6.2	-	55	6.2	-

<u>All</u> Added (b) to all mean and range headings and changed the (b) footnote from: "Concentrations including MDC value(s)." to: "Mean and range based upon detectable measurements only."

Table D-1 Hudson River Water

Hudson River Water (pCi/l)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	All Indicator Samples (b) Range	All Indicator Samples (a) Fraction Detectable	Location with Highest Mean: Station	Location with Highest Mean (b) Mean	Location with Highest Mean (b) Range	Location with Highest Mean (a) Fraction Detectable	Control Locations (b) Mean	Control Locations (b) Range	Control Locations (a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		24	--	---	0/24	--	---	---	--			
	K-40		24	--	---	0/24	--	---	---	--			
	Mn-54		24	--	---	0/24	--	---	---	--			
	Co-58		24	--	---	0/24	--	---	---	--			
	Co-60		24			1/24	10	4	---	1/12			
	Zr-95		24	--	---	0/24	--	---	---	--			
	Ru-103		24	--	---	0/24	--	---	---	--			
	Ru-106		24	--	---	0/24	--	---	---	--			
	I-131		24	--	---	0/24	--	---	---	--			
	Cs-134		24	--	---	0/24	--	---	---	--			
	Cs-137	5	24	5		1/24	10	5	---	1/12			
	Ba-140		24	--	---	0/24	--	---	---	--			
	Ce-141		24	--	---	0/24	--	---	---	--			
	Ce-144		24	--	---	0/24	--	---	---	--			
	Ra-226		24	--	---	0/24	--	---	---	--			
	Th-228		24	--	---	0/24	-	--	---	--			
Tritium Analysis	H-3	200	8	540	130-1540	8/8	10	8[illegible]	360-1540	4/4			
Radio-chemical	Sr-89		2	--	---	0/2	-	--	---	--			
	Sr-90	1	2	--	---	0/2	-	--	---	--			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-2 Hudson River Aquatic Vegetation

Hudson River Aquatic Vegetation (pCi/kg - Wet)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean Station	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		30	575	347-913	3/27	54	913	---	1/4	---	---	--
	K-40		30	2560	1010-15400	26/27	54	5500	1010-15400	4/4	3120	2130-3750	3/3
	Mn-54		30	1620	---	1/27	15	1620	---	1/2	---	---	--
	Co-58		30	--	---	0/27	--	---	---	--	---	---	--
	Co-60		30	71	30-169	14/27	22	92	43 - 141	2/2	14		1/3
	Zr-95		30	--	---	0/27	--	---	---	--	---	---	--
	Ru-103		30	--	---	0/27	--	---	---	--	---	---	--
	Ru-106		30	--	---	0/27	--	---	---	--	---	---	--
	I-131	50	30	--	---	0/27	--	---	---	--	---	---	--
	Cs-134		30	--	---	0/27	--	---	---	--	---	---	--
	Cs-137	50	30	109	22-266	19/27	49	266	---	1/2	53	36-78	3/3
	Ba-140		30	--	---	0/27	--	---	---	--	---	---	--
	Ce-141		30	--	---	0/27	--	---	---	--	---	---	--
	Ce-144		30	--	---	0/27	--	---	---	--	---	---	--
	Ra-226		30	623	---	1/27	22	623	---	1/2	---	---	--
	Th-228		30	167	92-243	4/27	49	243	---	1/2	88	55-121	2/3
Radio-Chemical	I-131	50	30	---	---	0/27	--	---	---	--	---	---	--

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-3 Hudson River Bottom Sediment

Hudson River Bottom Sediment (pCi/kg)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	All Indicator Samples (b) Range	All Indicator Samples (a) Fraction Detectable	Location with Highest Mean: Station	Location with Highest Mean (b) Mean	Location with Highest Mean (b) Range	Location with Highest Mean (a) Fraction Detectable	Control Locations (b) Mean	Control Locations (b) Range	Control Locations (a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		24	--	---	0/22	--	---	---	--	---	---	--
	K-40		24	14600	1860-21300	22/22	15	19300	19000-19500	2/2	19000	18900-19000	2/2
	Mn-54		24	--	---	0/22	--	---	---	--	---	---	--
	Co-58		24	--	---	0/22	--	---	---	--	---	---	--
	Co-60		24	300	55- 970	11/22	10	579	187-970	2/2	---	---	--
	Zr-95		24	--	---	0/22	--	---	---	--	---	---	--
	Ru-103		24	--	---	0/22	--	---	---	--	---	---	--
	Ru-106		24	--	---	0/22	--	---	---	--	---	---	--
	I-131		24	--	---	0/22	--	---	---	--	---	---	--
	Cs-134		24	117	66- 170	3/22	16	170	---	1/2	---	---	--
	Cs-137	5000	24	1720	10-11100	22/22	10	6310	1520-11100	2/2	866	172-1560	2/2
	Ba-140		24	--	---	0/22	--	---	---	--	---	---	--
	Ce-141		24	--	---	0/22	--	---	---	--	---	---	--
	Ce-144		24	--	---	0/22	--	---	---	--	---	---	--
	Ra-226		24	1800	656-3270	12/22	28	2040	1390-2680	2/2	2010	2000-2020	2/2
	Th-228		24	977	233-1730	21/22	15	1340	1210-1460	2/2	1475	1400-1550	2/2

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-4 Hudson River Shoreline Soil

Hudson River Shoreline Soil (pCi/kg - Dry)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean: Station	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		24	1120		1/22	50	1120		1/2	--	---	--
	K-40		24	13100	8050-18300	22/22	54	16900	16800-16900	2/2	30800	2850-3300	2/2
	Mn-54		24	--	---	0/22	--	---	---	--	--	---	--
	Co-58		24	--	---	0/22	--	---	---	--	--	---	--
	Co-60		24	85	54-116	2/22	50	116	---	1/2	--	---	--
	Zr-95		24	--	---	0/22	--	---	---	--	--	---	--
	Ru-103		24	--	---	0/22	--	---	---	--	--	---	--
	Ru-106		24	--	---	0/22	--	---	---	--	--	---	--
	I-131		24	--	---	0/22	--	---	---	--	--	---	--
	Cs-134		24	24	---	1/22	49	24	---	1/2	--	---	--
	Cs-137		24	439	66-3310	22/22	49	1740	277 -3130	2/2	197	197	2/2
	Ba-140		24	--	---	0/22	--	---	---	--	--	---	--
	Ce-141		24	--	---	0/22	--	---	---	--	--	---	--
	Ce-144		24	--	---	0/22	--	---	---	--	--	---	--
	Ra-226		24	1880	609-3270	7/22	50	2750	2240 -3260	2/2	--	---	--
	Th-228		24	524	60-1940	22/22	50	1650	1350 -1940	2/2	663	507-818	2/2
Radio-chemical	Sr-89		7	--	---	0/7	--	---	---	--	--	---	--
	Sr-90		17	--	---	0/15	--	---	---	--	--	---	0/2

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-5 Hudson River Shellfish

Hudson River Shellfish (pCi/kg - wet)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean: Station	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		1	--	---	0/1	--	--	---	--			
	K-40		1	2950	---	1/1	25	2950	---	1/1			
	Mn-54		1	--	---	0/1	--	--	---	--			
	Co-58		1	--	---	0/1	--	--	---	--			
	Co-60		1	--	---	0/1	--	--	---	--			
	Zr-95		1	--	---	0/1	--	--	---	--			
	Ru-103		1	--	---	0/1	--	--	---	--			
	Ru-106		1	--	---	0/1	--	--	---	--			
	I-131		1	--	---	0/1	--	--	---	--			
	Cs-134		1	--	---	0/1	--	--	---	--			
	Cs-137	500	1	--	---	0/1	--	--	---	--			
	Ba-140		1	--	---	0/1	--	--	---	--			
	Ce-141		1	--	---	0/1	--	--	---	--			
	Ce-144		1	--	---	0/1	--	--	---	--			
	Ra-226		1	--	---	0/1	--	--	---	--			
	Th-228		1	--	---	0/1	--	--	---	--			
Radio-chemical	Sr-89												
	Sr-90	10	1	11	---	1/1	25	11	---	1/1			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Hudson River Fish (pCi/kg - Wet)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	All Indicator Samples (b) Range	All Indicator Samples (a) Fraction Detectable	Location with Highest Mean: Station	Location with Highest Mean (b) Mean	Location with Highest Mean (b) Range	Location with Highest Mean (a) Fraction Detectable	Control Locations (b) Mean	Control Locations (b) Range	Control Locations (a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		12	--	--	0/12	--	--	--	--			
	K-40		12	1830	5-2820	12/12	25	1830	5-2820	12/12			
	Mn-54		12	--	--	0/12	--	--	--	--			
	Co-58		12	--	--	0/12	--	--	--	--			
	Co-60		12	--	--	0/12	--	--	--	--			
	Zr-95		12	--	--	0/12	--	--	--	--			
	Ru-103		12	--	--	0/12	--	--	--	--			
	Ru-106		12	--	--	0/12	--	--	--	--			
	I-131		12	--	--	0/12	--	--	--	--			
	Cs-134		12	--	--	0/12	--	--	--	--			
	Cs-137	1000	12	43	20- 112	11/12	25	43	20- 112	11/12			
	Ba-140		12	--	--	0/12	--	--	--	--			
	Ce-141		12	--	--	0/12	--	--	--	--			
	Ce-144		12	--	--	0/12	--	--	--	--			
	Ra-226		12	--	--	0/12	--	--	--	--			
	Th-228		12	--	--	0/12	--	--	--	--			
Radio-chemical	Sr-89		4	--	--	0/4	--	--	--	--			
	Sr-90	10	4	7	2.4 - 12	4/4	25	7	2.4- 12	4/4			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
b) Mean and range based upon detectable measurements only.

Table D-7 Precipitation

Precipitation (pCi/l)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean: Station	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		72	64	39-77	10/60	29	62	39- 77	4/12	70	62-75	3/12
	K-40		72	--	---	0/60	--	---	---	--	--	---	--
	Mn-54		72	--	---	0/60	--	---	---	--	--	---	--
	Co-58		72	--	---	0/60	--	---	---	--	--	---	--
	Co-60		72	--	---	0/60	--	---	---	--	--	---	--
	Zr-95		72	--	---	0/60	--	---	---	--	--	---	--
	Ru-103		72	--	---	0/60	--	---	---	--	--	---	--
	Ru-106		72	--	---	0/60	--	---	---	--	--	---	--
	I-131		72	--	---	0/60	--	---	---	--	--	---	--
	Cs-134		72	--	---	0/60	--	---	---	--	--	---	--
	Cs-137	5	72	--	---	0/60	--	---	---	--	--	---	--
	Ba-140		72	--	---	0/60	--	---	---	--	--	---	--
	Ce-141		72	--	---	0/60	--	---	---	--	--	---	--
	Ce-144		72	--	---	0/60	--	---	---	--	--	---	--
	Ra-226		72	94	---	1/60	24	94	---	1/2	--	---	--
	Th-228		72	--	---	0/60		---	---	--	--	---	--
Tritium Analysis	H-3	200	72	242	70-1150	45/60	01	306	110 - 740	12/12	188	70-320	9/12

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-8 Drinking Water

Drinking Water (pCi/L)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Sales (b) Mean	All Indicator Sales (b) Range	All Indicator Sales (a) Fraction Detectable	Location with Highest Mean: Station	Location with Highest Mean (b) Mean	Location with Highest Mean (b) Range	Location with Highest Mean (a) Fraction Detectable	Control Locations (b) Mean	Control Locations (b) Range	Control Locations (a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		36	--	---	0/36	--	---	---	--			
	K-40		36	--	---	0/36	--	---	---	--			
	Mn-54		36	--	---	0/36	--	---	---	--			
	Co-58		36	--	---	0/36	--	---	---	--			
	Co-60		36	--	---	0/36	--	---	---	--			
	Zr-95		36	--	---	0/36	--	---	---	--			
	Ru-103		36	--	---	0/36	--	---	---	--			
	Ru-106		36	--	---	0/36	--	---	---	--			
	I-131		36	--	---	0/36	--	---	---	--			
	Cs-134		36	--	---	0/36	--	---	---	--			
	Cs-137	5	36	5	---	1/36	8	5	---	1/12			
	Ba-140		36	--	---	0/36	--	---	---	--			
	Ce-141		36	--	---	0/36	--	---	---	--			
	Ce-144		36	--	---	0/36	--	---	---	--			
	Ra-226		36	--	---	0/36	--	---	---	--			
	Th-228		36	--	---	0/36	--	---	---	--			
Tritium Analysis	H-3		12	122	20-350	10/12	7	156	72-350	4/4			
Radio-chemical	Sr-89		3	--	---	0/3	--	---	---	--			
	Sr-90	1	3	--	---	0/3	--	---	---	--			
	I-131	0.5	36	--	---	0/36	--	---	---	--			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-9 Air Particulates - Weekly

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	All Indicator Samples (b) Range	All Indicator Samples (a) Fraction Detectable	Location with Highest Mean: Station	Location with Highest Mean (b) Mean	Location with Highest Mean (b) Range	Location with Highest Mean (a) Fraction Detectable	Control Locations (b) Mean	Control Locations (b) Range	Control Locations (a) Fraction Detectable
				Air Particulate (pCi/m3) (Weekly)									
Gamma Spectrum Analysis	Be-7		768	0.15	0.02 -0.34	468/717	03, 29	0.12	0.05 - 0.2	51/51	0.14	0.07- 0.2	29/51
	K-40		768	0.11	0.03 -0.2	33/717	04	0.17	---	1/51	0.15	0.1-0.2	2/51
	Mn-54		768	--	---	0/717	--	---	---	--	--	---	--
	Co-58		768	--	---	0/717	--	---	---	--	--	---	--
	Co-60		768	--	---	0/717	--	---	---	--	--	---	--
	Zr-95		768	--	---	0/717	--	---	---	--	--	---	--
	Ru-103		768	--	---	0/717	--	---	---	--	--	---	--
	Ru-106		768	--	---	0/717	--	---	---	--	--	---	--
	I-131		768	--	---	0/717	--	---	---	--	--	---	--
	Cs-134		768	--	---	0/717	--	---	---	--	--	---	--
	Cs-137	.02	768	0.006	0.004-0.007	2/717	05	0.007	---	1/52	--	---	--
	Ba-140		768	--	---	0/717	--	---	---	--	--	---	--
	Ce-141		768	--	---	0/717	--	---	---	--	--	---	--
	Ce-144		768	--	---	0/717	--	---	---	--	--	---	--
	Ra-226		768	--	---	0/717	--	---	---	--	--	---	--
	Th-228		768	--	---	0/717	--	---	---	--	--	---	--
Gross β	Gr-β	0.0	768	0.015	0.005-0.027	715/717	03	0.02	0.006- 0.03	51/52	0.02	0.006-0.02	51/51
Charcoal Filter	I-131	0.04	768	--	---	0/717	--	---	---	--	--	---	--

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-10 Air Particulates - Monthly Composite

Air Particulate (pCi/m3)
(Monthly Composite)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean Sta-tion	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		180	0.01	0.01- 0.01	168/168	29	0.01	0.01 - 0.06	12/12	0.1	0.06- 0.1	12/12
	K-40		180	0.03	0.01- 0.05	16/168	03	0.04	---	1/12	0.03	0.001-0.05	2/12
	Mn-54		180	--	---	0/168	--	---	---	--	--	---	--
	Co-58		180	--	---	0/168	--	---	---	--	--	---	--
	Co-60		180	--	---	0/168	--	---	---	--	--	---	--
	Zr-95		180	--	---	0/168	--	---	---	--	--	---	--
	Ru-103		180	--	---	0/168	--	---	---	--	--	---	--
	Ru-106		180	--	---	0/168	--	---	---	--	--	---	--
	I-131		180	--	---	0/168	--	---	---	--	--	---	--
	Cs-134		180	--	---	0/168	--	---	---	--	--	---	--
	Cs-137	0.006	180	0.003	0.001-0.004	2/168	22	0.004	---	1/12	--	---	--
	Ba-140		180	--	---	0/168	--	---	---	--	--	---	--
	Ce-141		180	--	---	0/168	--	---	---	--	--	---	--
	Ce-144		180	--	---	0/168	--	---	---	--	--	---	--
	Ra-226		180	--	---	0/168	--	---	---	--	--	---	--
	Th-228		180	--	---	0/168	--	---	---	--	--	---	--

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-11 Air Particulates - Quarterly Composite

				Air Particulate (pCi/m3) (Quarterly Composite)									
				All Indicator Samples			Location with Highest Mean				Control Locations		
Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	(b) Mean	(b) Range	(a) Fraction Detectable	Station	(b) Mean	(b) Range	(a) Fraction Detectable	(b) Mean	(b) Range	(a) Fraction Detectable
Radio-chemical	Sr-89		60	—	---	0/56	--	---	---	--	--	---	0/4
	Sr-90	0.001	60	0.09E-4	0.08-0.1 E-3	3/56	--	---	---	--	0.1E-3	---	1/4

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-12 Surface Water

Surface Water (pCi/l)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Sames (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean Sta-tion	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		36	--	---	0/36	--	--	---	--			
	K-40		36	--	---	0/36	--	--	---	--			
	Mn-54		36	--	---	0/36	--	--	---	--			
	Co-58		36	--	---	0/36	--	--	---	--			
	Co-60		36	--	---	0/36	--	--	---	--			
	Zr-95		36	--	---	0/36	--	--	---	--			
	Ru-103		36	--	---	0/36	--	--	---	--			
	Ru-106		36	--	---	0/36	--	--	---	--			
	I-131		36	--	---	0/36	--	--	---	--			
	Cs-134		36	--	---	0/36	--	--	---	--			
	Cs-137	5	36	--	---	0/36	--	--	---	--			
	Ba-140		36	--	---	0/36	--	--	---	--			
	Ce-141		36	--	---	0/36	--	--	---	--			
	Ce-144		36	--	---	0/36	--	--	---	--			
	Ra-226		36	--	---	0/36	--	--	---	--			
	Th-228		36	--	---	0/36	--	--	---	--			
Tritium Analysis	H-3	200	12	146	57-310	11/12	11	188	66-310	3/4			
Radio-chemical	Sr-89		3	--	---	0/3	--	--	---	--			
	Sr-90	1	3	--	---	0/3	--	--	---	--			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-13 Well (Ground) Water

Ground Water (pCi/l)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean: Station	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		24	--	---	0/24	--	---	---	--			
	K-40		24	--	---	0/24	--	---	---	--			
	Mn-54		24	--	---	0/24	--	---	---	--			
	Co-58		24	--	---	0/24	--	---	---	--			
	Co-60		24	--	---	0/24	--	---	---	--			
	Zr-95		24	--	---	0/24	--	---	---	--			
	Ru-103		24	--	---	0/24	--	---	---	--			
	Ru-106		24	--	---	0/24	--	---	---	--			
	I-131		24	--	---	0/24	--	---	---	--			
	Cs-134		24	--	---	0/24	--	---	---	--			
	Cs-137	5	24	7.6	4.3- 10.9	2/24	18	10.9	---	1/12			
	Ba-140		24	--	---	0/24	--	---	---	--			
	Ce-141		24	--	---	0/24	--	---	---	--			
	Ce-144		24	--	---	0/24	--	---	---	--			
	Ra-226		24	--	---	0/24	--	---	---	--			
	Th-228		24	--	---	0/24	--	---	---	--			
Tritium Analysis	H-3	200	8	213	86-340	8/8	18	205	170-240	4/4			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-14 Lake Aquatic Vegetation

Lake Aquatic Vegetation (pCi/kg - wet)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean Station	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		2	1120	680-1550	2/2	11	1550	---	1/1			
	K-40		2	1380	1330-1430	2/2	11	2900	---	1/1			
	Mn-54		2	--	---	0/2	--	---	---	--			
	Co-58		2	--	---	0/2	--	---	---	--			
	Co-60		2	--	---	0/2	--	---	---	--			
	Zr-95		2	--	---	0/2	--	---	---	--			
	Ru-103		2	--	---	0/2	--	---	---	--			
	Ru-106		2	--	---	0/2	--	---	---	--			
	I-131	50	2	--	---	0/2	--	---	---	--			
	Cs-134		2	--	---	0/2	--	---	---	--			
	Cs-137	50	2	29	12 - 45	2/2	13	45	---	1/1			
	Ba-140		2	--	---	0/2	--	---	---	--			
	Ce-141		2	--	---	0/2	--	---	---	--			
	Ce-144		2	--	---	0/2	--	---	---	--			
	Ra-226		2	--	---	0/2	--	---	---	--			
	Th-228		2	--	---	0/2	--	---	---	--			
Radio Chemical	I-131	50	2	--	---	0/2	--	---	---	--			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-15 Soil

Soil (pCi/kg)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	(b) Range	(a) Fraction Detectable	Location with Highest Mean Station	(b) Mean	(b) Range	(a) Fraction Detectable	Control Locations (b) Mean	(b) Range	(a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		10	---	---	0/10	--	---	---	--			
	K-40		10	11900	8690-14900	10/10	31	14900	---	1/1			
	Mn-54		10	---	---	0/10	--	---	---	--			
	Co-58		10	---	---	0/10	--	---	---	--			
	Co-60		10	---	---	0/10	--	---	---	--			
	Zr-95		10	---	---	0/10	--	---	---	--			
	Ru-103		10	---	---	0/10	--	---	---	--			
	Ru-106		10	---	---	0/10	--	---	---	--			
	I-131		10	---	---	0/10	--	---	---	--			
	Cs-134		10	88	---	1/10	31	88	---	1/1			
	Cs-137	200	10	831	158-2800	10/10	31	2800	---	1/1			
	Ba-140		10	---	---	0/10	--	---	---	--			
	Ce-141		10	---	---	0/10	--	---	---	--			
	Ce-144		10	---	---	0/10	--	---	---	--			
	Ra-226		10	1180	896-2040	8/10	20	2040	---	1/1			
	Th-228		10	777	270-1190	10/10	21	1190	---	1/1			
Radio-chemical	Sr-89		10										
	Sr-90	5000	10	195	48-610	6/10	19	610		1/1			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-16 Milk

Milk (pCi/ℓ)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	All Indicator Samples (b) Range	All Indicator Samples (a) Fraction Detectable	Location with Highest Mean: Station	Location with Highest Mean (b) Mean	Location with Highest Mean (b) Range	Location with Highest Mean (a) Fraction Detectable	Control Locations (b) Mean	Control Locations (b) Range	Control Locations (a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		24	--	---	0/12	--	---	---	--	--	---	--
	K-40		24	1220	856-1580	12/12	55	1220	856-1580	12/12	1257	764-1610	12/12
	Mn-54		24	--	---	0/12	--	---	---	--	--	---	--
	Co-58		24	--	---	0/12	--	---	---	--	--	---	--
	Co-60		24	--	---	0/12	--	---	---	--	--	---	--
	Zr-95		24	--	---	0/12	--	---	---	--	--	---	--
	Ru-103		24	--	---	0/12	--	---	---	--	--	---	--
	Ru-106		24	--	---	0/12	--	---	---	--	--	---	--
	I-131		24	--	---	0/12	--	---	---	--	--	---	--
	Cs-134	10	24	--	---	0/12	--	---	---	--	--	---	--
	Cs-137	5	24	6.2	---	1/12	55	6.2	---	1/12	--	---	--
	Ba-140		24	--	---	0/12	--	---	---	--	--	---	--
	Ce-141		24	--	---	0/12	--	---	---	--	--	---	--
	Ce-144		24	--	---	0/12	--	---	---	--	--	---	--
	Ra-226		24	--	---	0/12	--	---	---	--	--	---	--
	Th-228		24	--	---	0/12	--	---	---	--	--	---	--
Radio-chemical	Sr-89	2	24	--	---	0/12	--	---	---	--	--	---	--
	Sr-90	1	24	2.2	1.1-4.0	12/12	55	2.2	1.1-4.0	12/12	3.2	2.3-4.7	12/12
	I-131	0.5	24	--	---	0/12	--	---	---	--	--	---	--

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.

Table D-17 Leafy Green Vegetation

Leafy Green Vegetables (pCi/kg - Wet)

Analysis Type	Detected Nuclide	MDC	Total Samples Analyzed	All Indicator Samples (b) Mean	All Indicator Samples (b) Range	All Indicator Samples (a) Fraction Detectable	Location with Highest Mean: Station	Location with Highest Mean (b) Mean	Location with Highest Mean (b) Range	Location with Highest Mean (a) Fraction Detectable	Control Locations (b) Mean	Control Locations (b) Range	Control Locations (a) Fraction Detectable
Gamma Spectrum Analysis	Be-7		2	--	---	0/2	--	---	---	--			
	K-40		2	2520	2420-2620	2/2	41	2520	2420-2620	2/2			
	Mn-54		2	--	---	0/2	--	---	---	--			
	Co-58		2	--	---	0/2	--	---	---	--			
	Co-60		2	--	---	0/2	--	---	---	--			
	Zr-95		2	--	---	0/2	--	---	---	--			
	Ru-103		2	--	---	0/2	--	---	---	--			
	Ru-106		2	--	---	0/2	--	---	---	--			
	I-131	50	2	--	---	0/2	--	---	---	--			
	Cs-134		2	--	---	0/2	--	---	---	--			
	Cs-137	50	2	--	---	0/2	--	---	---	--			
	Ba-140		2	--	---	0/2	--	---	---	--			
	Ce-141		2	--	---	0/2	--	---	---	--			
	Ce-144		2	--	---	0/2	--	---	---	--			
	Ra-226		2	--	---	0/2	--	---	---	--			
	Th-228		2	--	---	0/2	--	---	---	--			

(a) Fraction Detectable = Number of samples with detectable activity for this radionuclide/Total number of samples of this medium analyzed.
(b) Mean and range based upon detectable measurements only.