

**TABLE 1. BCLDP GROUNDWATER MONITORING WELLS
WEST JEFFERSON SITE**

WELL ID	WELL DEPTH (ft)	ELEVATION OF TOP OF CASING	Jun-00	DEPTH TO WATER (ft)	Nov-00	DEPTH DIFFERENCE
JN*	138	N/A	N/A		N/A	N/A
JM*	162	N/A	N/A		N/A	N/A
JS*	130	N/A	N/A		N/A	N/A
C-03	13.10	912.15	5.57		7.83	-2.26
C-09	10.60	895.32	3.13		3.19	-0.06
C-16	15.50	911.95	7.34		8.31	-0.97
100	21.72		11.95		11.86	0.09
101	12.67		8.35		9.35	-1.00
103	12.67	864.90	9.47		9.54	-0.07
110	17.60		9.68		9.84	-0.16
116	17.40		4.35		9.15	-4.80
118	12.68	863.64	8.13		7.79	0.34
150	11.68	894.46	3.45		3.69	-0.24
155	16.91	898.46	5.52		5.87	-0.35
168	11.85	894.62	3.50		3.71	-0.21
172	12.09	895.00	3.46		3.78	-0.32
206	21.60	910.78	7.56		8.66	-1.10
300	37.60		24.12		23.57	0.55
306	16.60	913.20	5.55		6.10	-0.55
506	12.90	909.72	3.85		8.74	-4.89
601	11.10	913.10	4.30		6.74	-2.44

* DENOTES ACTIVE SUPPLY WELL

CASING ELEVATION IN ft MSL

JT 7/05

Table 2. Strontium-90 Concentrations in the Groundwater of West Jefferson North Site's Shallow Monitoring Wells during Calendar Years 2000 and 2001¹

Well Number	CY 2000 Sr 90 (pCi/L)	CY 2001 Sr 90 First Semi-Annual Sample (pCi/L)	CY 2001 Sr 90 Second Semi-Annual Sample (pCi/L)
100	2	<1	2
101	3	2	3
103	4	3	4
110R	<1	3	<1
116R	<1	<1	<1
118	5	3	5
150	<1		<1
155	1	<1	1
168	10	9	10
172	7	7	7
206	<1	<1	<1
300	11	<1	11
306	2	<1	2
506	2	<1	2
601	<1	1	<1
C03	1	2	1
C09	16	14	16
C16	<1	<1	<1

¹From the U.S. Nuclear Regulatory Commission Region III-Decommissioning Branch's NRC Inspection Report No. 070-00008/05-002. Initially revised from *BCLDP Site Environmental Report Calendar Year 2000 on Radiological and Nonradiological Parameters* where the calendar year (CY) 2000 values are the average of two sampling periods. Bolded Analytical results equal or exceed the U.S. EPA's maximum contamination limit (MCL).

Table 3. Gross Alpha, Gross Beta, and Strontium-90 Concentrations in the Groundwater of West Jefferson North Site's Shallow Monitoring Wells during Calendar years 2002 through 2005¹

Well No.	Battelle 2002 ²			Battelle 2003 ²			Battelle 2004 ²			Battelle 2005						NRC 2005 ³	
	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Sr 90 (pCi/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Sr 90 (pCi/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Sr 90 (pCi/L)	May ⁴ Gross Alpha (pCi/L)	May ⁴ Gross Beta (pCi/L)	May ⁴ Sr 90 (pCi/L)	June ⁵ Gross Alpha (pCi/L)	June ⁵ Gross Beta (pCi/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Well No and Sr 90 (pCi/L)
100	4/1	5/5	2/2	1/1	4/3	2/2	6/4	11/7	2/2	6	7	2	1	4	3 ^{5e}	5 ^{4e}	(100) 2 100D ⁶ 2
101	1/8	2/18	2/5	18/4	27/8	4/3	2/7	9/13	3/3	NS	NS	NS	NS	NS	NS	NS	(101) NS
103	1/1	9/9	4/5	1/1	6/9	4/4	13/1	12/11	3/4	NS	NS	NS	NS	NS	NS	NS	(103) NS
110R	4/6	7/15	2/2	6/4	26/9	2/2	7/7	18/22	1/2	52	58	1	NS	NS	NS	NS	(110R) NS
116R	1/5	3/9	2/2	3/5	7/8	22	0/	0/0	NS	NS	NS	NS	NS	NS	NS	NS	(116R) NS
118	3/9	10/17	6/6	7/9	13/15	5/5	1/8	11/17	4/5	2	10	2	4	10	2 ^{6e}	7 ^{8e}	(118) 2 118D ⁶ 1
150	2/9	3/8	2/2	1/3	5/6	2/2	4/4	6/8	2/1	NS	NS	NS	NS	NS	NS	NS	(150) NS
155	2/4	5/7	3/2	1/3	1/2	2/2	1/3	5/10	2/2	NS	NS	NS	NS	NS	NS	NS	(155) NS
168	7/9	24/15	10/8	2/7	17/26	8/9	2/3	21/28	8/9	28	30	5	22	29	3	76	(168) 46
172	10/6	16/19	9/7	1/9	16/15	10/9	1/10	18/25	10/9	NS	NS	NS	NS	NS	NS	NS	(172) NS
206	2/8	4/8	2/2	2/3	1/3	2/	1/0	5/4	1/1	4	4	2	4	5	4	3	(206) 1
300	4/8	5/12	2/2	2/4	4/7	2/2	5/1	9/11	2/1	5	9	1	NS	NS	NS	NS	(300) NS
306	9/5	8/7	2/2	1/7	16/6	2/2	0/17	0/20	NS/2	6	13	1	6	11	5	22	(306) 5
506	9/10	5/12	2/2	1/3	4/6	2/2	5/12	7/8	2/1	6	9	1	10	13	2	5	(506) 2
601	4/1	1/1	2/2	11/25	5/14	2/2	20/3	36/6	2/1	1	4	1	44	70	22	46	(601) 2
C03	6/6	5/11	2/4	8/10	3/15	2/2	13/6	14/14	2/1	21	86	1	NS	NS	NS	NS	(C03) NS
C09	7/9	19/26	12/12	2/7	34/25	15/15	8/14	19/61	7/30	3	68	17	2	104	1	12	(C09) 0
C16	1/3	1/5	2/2	1/1	2/1	2/2	3/4	21/7	2/1	2	4	1	5	6	1	2	(C16) 0

¹From the U.S. Nuclear Regulatory Commission Region III-Decommissioning Branch's NRC Inspection Report No. 070-00008/05-002. Initially from Battelle's Semi-annual Environmental Sample Collection. Bolded Analytical results equal or exceed the U.S. EPA's maximum contamination

Table 3. Gross Alpha, Gross Beta, and Strontium-90 Concentrations in the Groundwater of West Jefferson North Site's Shallow Monitoring Wells during Calendar years 2002 through 2005¹

limit (MCL).

²Analytical results are for the two samples each year.

³Split sample taken for NRC. Analytical procedures performed by NRC's contract laboratory, ORISER. Wells not sampled are denoted with NS.

⁴Battelle's Semi-annual Environmental Sample.

⁵Water sample collected by Battelle from the same well after the NRC collected its split groundwater sample.

⁶Duplicate sample taken by NRC from the same well.

Table 4. Radiological Analyses of Groundwater Monitoring Wells Installed August - September 2006 at the West Jefferson North Site

PC/LL

Aug-06 NUCLIDE	WELL #2-885	WELL #2-855	WELL #2-805	WELL #3-855A	WELL #3-855B	WELL #3-805	WELL #4-885	WELL #4-855	WELL #4-805
Gross Alpha	8.00E+00 *	3.00E+00	5.00E+00 *	1.00E+01 *	3.00E+00	3.00E+00	6.00E+00 *	5.00E+00 *	3.00E+00
Gross Beta	1.50E+01 *	1.30E+01 *	7.00E+00 *	6.00E+00 *	9.70E+01 *	8.00E+00 *	3.83E+02 *	6.00E+00 *	4.00E+00
Co-60	1.94E+00	1.58E+00	1.94E+00	1.43E+00	1.80E+00	1.22E+00	2.79E+00	1.31E+00	1.30E+00
Sr-90	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
Sb-125	5.49E+00	3.62E+00	5.12E+00	3.33E+00	4.98E+00	3.18E+00	7.06E+00	3.81E+00	3.67E+00
Cs-134	1.79E+00	1.31E+00	1.81E+00	1.55E+00	1.58E+00	1.08E+00	2.25E+00	1.13E+00	1.18E+00
Cs-137	2.04E+00	1.39E+00	2.08E+00	1.39E+00	1.87E+00	1.23E+00	2.87E+00	1.29E+00	1.34E+00
Eu-152	1.18E+01	7.74E+00	1.06E+01	6.53E+00	9.62E+00	6.07E+00	1.39E+01	6.55E+00	6.47E+00
Eu-154	3.97E+00	2.66E+00	3.91E+00	2.37E+00	3.73E+00	2.38E+00	5.01E+00	2.53E+00	2.50E+00
Am-241	2.30E+01	7.60E+00	2.15E+01	6.58E+00	2.06E+01	6.53E+00	2.85E+01	6.66E+00	7.25E+00
Pu-238 (a)	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
Pu-239 (a)	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
U-234 (a)	6.97E+00 *	3.76E+00 *	5.98E+00 *	1.38E+01 *	8.22E+00 *	1.00E+00	4.45E+01 *	1.00E+00	1.00E+00
U-235 (a)	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	5.07E+00 *	1.00E+00	1.00E+00
U-238 (a)	4.76E+00 *	2.95E+00 *	3.18E+00 *	6.07E+00 *	8.07E+00 *	1.00E+00	4.55E+01 *	1.00E+00	1.00E+00

* DENOTES CALCULATED VALUE, ALL OTHER VALUES ARE LESS THAN OR EQUAL TO MDA
(a) DENOTES ANALYSIS PERFORMED BY ALPHA SPECTROSCOPY

Sep-06 NUCLIDE	WELL #5-855	WELL #5-805	WELL #6-885	WELL #6-855	WELL #6-805	WELL #7-885	WELL #7-855	WELL #7-805	WELL #8-885	WELL #8-855	WELL #8-805	WELL #9-855	WELL #9-805
Gross Alpha	4.00E+00 *	3.00E+00 *	4.00E+00 *	1.40E+01 *	5.00E+00 *	9.00E+00 *	9.00E+00 *	8.00E+00 *	4.00E+00 *	1.70E+01 *	5.00E+00 *	3.00E+00 *	9.00E+00 *
Gross Beta	4.00E+00	4.00E+00	4.00E+00	7.00E+00	4.00E+00	9.00E+00	8.00E+00	1.70E+01	1.00E+01	5.00E+00	1.00E+01	1.40E+01	3.60E+01 *
Co-60	1.26E+00	1.85E+00	1.28E+00	1.39E+00	2.30E+00	2.23E+00	1.57E+00	1.92E+00	1.26E+00	2.30E+00	1.64E+00	1.84E+00	1.36E+00
Sr-90	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
Sb-125	3.01E+00	4.69E+00	3.90E+00	4.13E+00	5.68E+00	5.82E+00	4.14E+00	4.91E+00	3.34E+00	6.22E+00	4.37E+00	4.95E+00	3.52E+00
Cs-134	1.09E+00	1.61E+00	1.34E+00	1.46E+00	1.97E+00	2.21E+00	1.49E+00	1.64E+00	1.06E+00	1.98E+00	1.40E+00	1.84E+00	1.31E+00
Cs-137	1.19E+00	1.76E+00	1.36E+00	1.56E+00	2.31E+00	2.64E+00	1.49E+00	6.01E+00 *	1.24E+00	2.13E+00	1.75E+00	2.01E+00	1.27E+00
Eu-152	4.85E+00	8.89E+00	6.76E+00	7.17E+00	1.12E+01	1.10E+01	8.43E+00	9.50E+00	6.48E+00	1.17E+01	7.96E+00	1.12E+01	6.60E+00
Eu-154	2.28E+00	3.28E+00	2.48E+00	2.86E+00	3.99E+00	4.53E+00	2.84E+00	3.33E+00	2.28E+00	4.01E+00	2.82E+00	3.86E+00	2.54E+00
Am-241	6.16E+00	1.92E+01	8.69E+00	8.15E+00	2.34E+01	2.46E+01	9.51E+00	1.85E+01	8.60E+00 *	2.38E+01	8.61E+00	2.12E+01	1.24E+01 *

* DENOTES CALCULATED VALUE, ALL OTHER VALUES ARE LESS THAN OR EQUAL TO MDA