

**ISRA 009 – B1-2.  
Soil Sampling for Radionuclides.  
Results and Statistical Analysis.  
Waste Certification.**

This data package provides the laboratory results and statistical analysis of the 12 samples taken at the ISRA Outfall 009, B1-2 area. This analysis and data interpretation complies with the procedure approved by the California Department of Public Health<sup>1</sup>.

Samples taken for waste disposal characterization were analyzed for strontium-90, tritium and gamma emitting radionuclides by gamma spectroscopy, using an off-site laboratory. Minimum detectable activity (MDA) for cesium-137 and strontium-90 averaged ~0.037 pCi/g and ~0.038 pCi/g respectively. Minimum detectable activity for tritium averaged ~0.74 pCi/g. The gamma spectroscopy library also included the following contaminants-of-concern: Na-22, K-40, Mn-54, Co-60, Cs-134, Cs-137, Eu-152, Eu-154, Th-228, Th-232, U-235, U-238 and Am-241.

Statistical evaluation of sample analytical results to determine whether or not the sampled waste contains Cs-137 or Sr-90 activity elevated above local background was conducted using the Wilcoxon Rank Sum Test using protocols described in NUREG-1505<sup>2</sup> and DTSC guidance<sup>3</sup> (See Appendix 1). Appendix 2 shows the complete analytical results for all radionuclides. Complete laboratory data packages are available on request.

Local background data for cesium-137 and strontium-90 was taken from Table 20 of the 1995 McLaren/Hart report<sup>4</sup>. Background for tritium in soil is not well established, and is not reported in the 1995 McLaren/Hart report, therefore tritium background in soil is conservatively assumed to be zero. Tritium data is therefore compared to the MDA of the analysis and the EPA preliminary remediation goal (PRG)<sup>5</sup> for residential 10<sup>-6</sup> risk.

## Conclusions

**Cesium-137** - Based on the results of the statistical analysis of Appendix 1, soil to be excavated from B1-2 does not exceed the local background for Cs-137. The incremental dose from Cs-137 above background is therefore zero mrem/y. The highest Cs-137 result is 0.158 pCi/g which is less than the highest background result of 0.21 pCi/g. The highest non-background subtracted Cs-137 result is equivalent to an effective dose of 0.11 mrem/y<sup>6</sup>.

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<sup>1</sup> Boeing, "Northern Drainage Waste Sampling for Radionuclides." Revision 9, November 5, 2007. (Attachment 3 to Northern Drainage Work Plan) and "ISRA Waste Sampling for Radionuclides", Attachment A to the ISRA Soil Management Plan.

<sup>2</sup> NUREG-1505, Nuclear Regulatory Commission, "A Non-parametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys." January 1998. [http://www.philrutherford.com/Radiation\\_Cleanup\\_Standards/NUREG-1505.pdf](http://www.philrutherford.com/Radiation_Cleanup_Standards/NUREG-1505.pdf)

<sup>3</sup> DTSC, "Selecting Inorganic Constituents as Chemicals of Concern at Risk Assessments at Hazardous Waste Sites and Permitted Facilities." February 1997.

<sup>4</sup> McLaren/Hart, "Additional Soil and Water Sampling at the Brandeis-Bardin Institute and Santa Monica Mountains Conservancy." Jan 19, 1995. <http://www.etec.energy.gov/Health-and-Safety/Documents/BrandeisBardin/AddSoilandWaterSamp.pdf>

<sup>5</sup> EPA preliminary remediation goals for radionuclides - <http://epa-prgs.ornl.gov/radionuclides/>.

**Strontium-90** - Based on the results of the statistical analysis of Appendix 1, soil to be excavated from B1-2 does not exceed the local background for Sr-90, and indeed is all non-detect. The incremental dose from Sr-90 above background is therefore zero mrem/y. The highest Sr-90 result is 0.037 pCi/g which is non-detect and less than the highest background result of 0.13 pCi/g. The highest non-background subtracted, non-detect Sr-90 result is equivalent to an effective dose of 0.011 mrem/y<sup>6</sup>.

**Tritium** - All tritium results are non-detect, the average tritium result is -0.2 pCi/g and the highest tritium result is 0.052 pCi/g. The highest non-detected, non-background subtracted tritium result is equivalent to an effective dose of 0.0007 mrem/y<sup>6</sup>.

This waste is certified to be “radiologically” acceptable for shipment to, and disposal at, any waste disposal facility. The waste requires no further radiological controls.

This waste meets the requirements of disposal facility permits<sup>7,8</sup> and complies with the California Health & Safety Code<sup>9</sup>.

The Governor’s Executive Order D-62-02 prohibits the “*disposal of decommissioned materials to Class III landfills or unclassified management units.*” The soil from B1-2 is not decommissioned material, and does not originate from the proximity of any radiological facility. The sampling in this certification has therefore been conducted as a best management practice that complies with the requirements of D-62-02. Verification sampling and/or approval by the California Department of Public Health (CDPH) Radiologic Health Branch (RHB) are not required for the off-site disposal of decommissioned material or of the subject material<sup>10</sup>.

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<sup>6</sup> EPA dose compliance concentrations for radionuclides - <http://epa-dccs.ornl.gov/>. Soil concentrations that meet the 10<sup>-6</sup> residential risk PRG are < 0.1 mrem/y. The Cs-137 residential PRG of 0.0597 pCi/g is equivalent to 0.042 mrem/y. The Sr-90 residential PRG of 0.231 pCi/g is equivalent to 0.071 mrem/y. The tritium residential PRG of 2.28 pCi/g is equivalent to 0.032 mrem/y.

<sup>7</sup> This waste is exempt from regulation and licensing or is expressly authorized for disposal under the Radiation Control Law (Division 104, Part 9, Chapter 8 of the California Health & Safety Code).

<sup>8</sup> This waste is not prohibited from disposal by any government agency with jurisdictional authority over this waste.

<sup>9</sup> Division 104, Part 9, Chapter 5, Article 1, Section 114715, “No person shall bury, throw away, or in any manner dispose of radioactive wastes within the state except in a manner and at locations as will result in no significant radioactive contamination of the environment.” For the purposes of this requirement, “significant” is defined in Section 114710 as amounts of radioactive materials that are likely to expose persons to ionizing radiation greater than the guide levels published by the Federal Radiation Council (FRC). The FRC no longer exists, but the applicable guide level last published by the FRC was 500 mrem per year to a member of the public. Because the regulatory dose limit to members of the public has since been lowered to 100 mrem per year, CDPH/RHB conservatively utilizes the lower dose for purposes of defining “significant” radioactive contamination in this Article of the California Health and Safety Code.  
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=114001-115000&file=114705-114780>

<sup>10</sup> The California Department of Public Health (CDPH) Radiologic Health Branch (RHB) has stated in a November 9, 2007 email to Phil Rutherford (Boeing) ... “*The Governor's Executive Order D-62-02, does not specifically require the Department of Health Services (now the Department of*



Phil Rutherford  
Manager, Health, Safety & Radiation Services

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*Public Health) to perform verification sampling of decommissioned material or to provide approval for disposal of specific decommissioned material shipped offsite (e.g., to Class I or II landfills). The California DPH has not imposed a requirement that Boeing or the Department of Energy (DOE) seek DPH verification sampling or approval of all decommissioned material destined for Class I or II landfills in compliance with the Governor's Executive Order."*

**Appendix 1**

**Wilcoxon Rank Sum Statistical Test for Cesium-137 and Strontium-90**

**Wilcoxon Rank Sum Test -- (Cesium-137)****General Information:**

The WRS tests whether or not measurements of samples from a survey area (S) tend to be consistently larger than those from a background reference area (R) by more than the DCGL.

The null hypothesis,  $H_0$ , is: Survey sample concentrations exceed those in the background

The alternative hypothesis,  $H_a$ , is: Survey sample concentrations do not exceed those in the background

**Instruction on how to use this template:**

- 1) Enter analysis results in pCi/gram
- 2) Enter number of samples for background and survey data sets, m and n.
- 3) The WRS test is calculated using the method prescribed in NUREG-1505, Nuclear Regulatory Commission, "A Non-parametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys." January 1998.

DCGL (pCi/g)	0.008
Type I Error Rate, Alpha:	0.05
Type II Error Rate, Beta:	0.05
Number of Background Samples, m:	51
Number of Survey Samples, n:	12
Z-value for Alpha	1.645
Critical Value	1726
Sum of Reference Ranks	1728

If the sum of the reference ranks is larger than the critical value, there is enough evidence to reject the null hypothesis and accept the alternative hypothesis. Otherwise the null hypothesis is accepted.

**Test Result:**

**Survey sample concentrations do not exceed those in the background by more than the DCGL**

	<b>Bkgd Ref (R)</b>	<b>Survey (S)</b>
Mean	0.087	0.062
Max	0.213	0.158
Min	0.015	-0.023
$\sigma$	0.062	0.061
$m-1.96\sigma$	-0.035	-0.058
$m+1.96\sigma$	0.210	0.181

<b>No.</b>	<b>Soil ID</b>	<b>Cs-137</b>	<b>Adjusted Cs-137</b>	<b>Area</b>	<b>Ranks</b>	<b>Reference Ranks</b>
1		0.092	0.100	R	36	36
2		0.020	0.028	R	12	12
3		0.020	0.028	R	12	12
4		0.100	0.108	R	42	42
5		0.020	0.028	R	12	12
6		0.158	0.166	R	55.5	55.5
7		0.175	0.183	R	57	57
8		0.209	0.217	R	62	62
9		0.180	0.188	R	58	58
10		0.030	0.038	R	20	20
11		0.213	0.221	R	63	63
12		0.025	0.033	R	17	17
13		0.020	0.028	R	12	12
14		0.020	0.028	R	12	12
15		0.074	0.082	R	31	31
16		0.147	0.155	R	50	50
17		0.100	0.108	R	42	42

No.	Soil ID	Cs-137	Adjusted Cs-137	Area	Ranks	Reference Ranks
18		0.067	0.075	R	28.5	28.5
19		0.099	0.107	R	39	39
20		0.101	0.109	R	43	43
21		0.148	0.156	R	51	51
22		0.153	0.161	R	54	54
23		0.025	0.033	R	17	17
24		0.188	0.196	R	59	59
25		0.198	0.206	R	61	61
26		0.030	0.038	R	20	20
27		0.079	0.087	R	32	32
28		0.158	0.166	R	55.5	55.5
29		0.109	0.117	R	45	45
30		0.059	0.067	R	27	27
31		0.067	0.075	R	28.5	28.5
32		0.113	0.121	R	46	46
33		0.015	0.023	R	7	7
34		0.031	0.039	R	22	22
35		0.042	0.050	R	25	25
36		0.097	0.105	R	37.5	37.5
37		0.015	0.023	R	7	7
38		0.020	0.028	R	12	12
39		0.085	0.093	R	34	34
40		0.080	0.088	R	33	33
41		0.015	0.023	R	7	7
42		0.020	0.028	R	12	12
43		0.035	0.043	R	23.5	23.5
44		0.035	0.043	R	23.5	23.5
45		0.025	0.033	R	17	17
46		0.150	0.158	R	52.5	52.5
47		0.140	0.148	R	48.5	48.5
48		0.190	0.198	R	60	60
49		0.097	0.105	R	37.5	37.5
50		0.030	0.038	R	20	20
51		0.140	0.148	R	48.5	48.5
52	B1WC0019S001	-0.001	-0.001	S	3	0
53	B1WC0020S001	0.018	0.018	S	5	0
54	B1WC0021S001	0.054	0.054	S	26	0
55	B1WC0022S001	0.108	0.108	S	41	0
56	B1WC0023S001	0.158	0.158	S	52.5	0
57	B1WC0024S001	0.133	0.133	S	47	0
58	B1WC0025S001	0.098	0.098	S	35	0
59	B1WC0026S001	0.113	0.113	S	44	0
60	B1WC0035S001	0.078	0.078	S	30	0
61	B1WC0036S001	-0.023	-0.023	S	1	0
62	B1WC0037S001	-0.002	-0.002	S	2	0
63	B1WC0038S001	0.006	0.006	S	4	0
Sum					2018	1727.5

**Wilcoxon Rank Sum Test -- (Strontium-90)****General Information:**

The WRS tests whether or not measurements of samples from a survey area (S) tend to be consistently larger than those from a background reference area (R) by more than the DCGL..

The null hypothesis, Ho, is: Survey sample concentrations exceed those in the background

The alternative hypothesis, Ha, is: Survey sample concentrations do not exceed those in the background

**Instruction on how to use this template:**

- 1) Enter analysis results in pCi/gram
- 2) Enter number of samples for background and survey data sets, m and n.
- 3) The WRS test is calculated using the method prescribed in NUREG-1505, Nuclear Regulatory Commission, "A Non-parametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys." January 1998.

DCGL (pCi/g)	0.00
Type I Error Rate, Alpha:	0.05
Type II Error Rate, Beta:	0.05
Number of Background Samples, m:	51
Number of Survey Samples, n:	12
Z-value for Alpha	1.645
Critical Value	1726
Sum of Reference Ranks	1895

If the sum of the reference ranks is larger than the critical value, there is enough evidence to reject the null hypothesis and accept the alternative hypothesis. Otherwise the null hypothesis is accepted.

Test Result:

**Survey sample concentrations do not exceed those in the background by more than the DCGL**

	Bkgd Ref (R)	Survey (S)
Mean	0.051	0.012
Max	0.130	0.037
Min	0.005	-0.002
$\sigma$	0.030	0.012
m-1.96 $\sigma$	-0.008	-0.013
m+1.96 $\sigma$	0.109	0.036

No.	Soil ID	Sr-90	Adjusted Sr-90	Area	Ranks	Reference Ranks
1		0.030	0.030	R	23	23
2		0.010	0.010	R	9.5	9.5
3		0.045	0.045	R	38.5	38.5
4		0.045	0.045	R	38.5	38.5
5		0.050	0.050	R	48	48
6		0.040	0.040	R	30	30
7		0.035	0.035	R	25.5	25.5
8		0.050	0.050	R	48	48
9		0.050	0.050	R	48	48
10		0.130	0.130	R	62.5	62.5
11		0.120	0.120	R	61	61
12		0.040	0.040	R	30	30
13		0.045	0.045	R	38.5	38.5
14		0.130	0.130	R	62.5	62.5
15		0.050	0.050	R	48	48
16		0.088	0.088	R	56	56
17		0.080	0.080	R	53	53
18		0.100	0.100	R	60	60
19		0.069	0.069	R	52	52
20		0.097	0.097	R	58	58

No.	Soil ID	Sr-90	Adjusted Sr-90	Area	Ranks	Reference Ranks
21		0.084	0.084	R	55	55
22		0.098	0.098	R	59	59
23		0.045	0.045	R	38.5	38.5
24		0.045	0.045	R	38.5	38.5
25		0.020	0.020	R	15	15
26		0.045	0.045	R	38.5	38.5
27		0.089	0.089	R	57	57
28		0.050	0.050	R	48	48
29		0.045	0.045	R	38.5	38.5
30		0.050	0.050	R	48	48
31		0.045	0.045	R	38.5	38.5
32		0.040	0.040	R	30	30
33		0.045	0.045	R	38.5	38.5
34		0.045	0.045	R	38.5	38.5
35		0.045	0.045	R	38.5	38.5
36		0.025	0.025	R	19.5	19.5
37		0.082	0.082	R	54	54
38		0.045	0.045	R	38.5	38.5
39		0.040	0.040	R	30	30
40		0.035	0.035	R	25.5	25.5
41		0.025	0.025	R	19.5	19.5
42		0.005	0.005	R	4	4
43		0.020	0.020	R	15	15
44		0.010	0.010	R	9.5	9.5
45		0.020	0.020	R	15	15
46		0.020	0.020	R	15	15
47		0.050	0.050	R	48	48
48		0.030	0.030	R	23	23
49		0.030	0.030	R	23	23
50		0.020	0.020	R	15	15
51		0.040	0.040	R	30	30
52	B1WC0019S001	-0.001	-0.001	S	2	0
53	B1WC0020S001	0.007	0.007	S	7	0
54	B1WC0021S001	0.016	0.016	S	12	0
55	B1WC0022S001	0.037	0.037	S	27	0
56	B1WC0023S001	0.029	0.029	S	21	0
57	B1WC0024S001	0.000	0.000	S	3	0
58	B1WC0025S001	0.024	0.024	S	18	0
59	B1WC0026S001	0.008	0.008	S	8	0
60	B1WC0035S001	0.006	0.006	S	6	0
61	B1WC0036S001	0.010	0.010	S	11	0
62	B1WC0037S001	0.006	0.006	S	5	0
63	B1WC0038S001	-0.002	-0.002	S	1	0
Sum					2016	1895



**Soil Data from ISRA 009 - B1-2**

No.	Sample ID	Stockpile ID	Sampling Date	Laboratory Batch	Cesium-137 (pCi/g)				Strontium-90 (pCi/g)				Tritium (pCi/g)			
					Activity	+/- 2σ Error	MDA	Non-detect?	Activity	+/- 2σ Error	MDA	Non-detect?	Activity	+/- 2σ Error	MDA	Non-detect?
1	B1WC0019S001	N/A	4/30/2010	252090	-0.00076	0.0228	0.0407	NDA	-0.000999	0.0189	0.0382	NDA	-0.18	0.455	0.797	NDA
2	B1WC0020S001	N/A	4/30/2010	252090	0.0182	0.0208	0.0382	NDA	0.0073	0.0185	0.0343	NDA	-0.44	0.44	0.787	NDA
3	B1WC0021S001	N/A	4/30/2010	252090	0.0535	0.0323	0.0314		0.016	0.0211	0.0361	NDA	-0.199	0.454	0.797	NDA
4	B1WC0022S001	N/A	4/30/2010	252090	0.108	0.0356	0.0442		0.0368	0.025	0.0379	NDA	-0.379	0.448	0.796	NDA
5	B1WC0023S001	N/A	4/30/2010	252090	0.158	0.0443	0.0284		0.0294	0.021	0.0324	NDA	-0.238	0.428	0.756	NDA
6	B1WC0024S001	N/A	4/30/2010	252090	0.133	0.0345	0.0287		8.62E-06	0.0224	0.0425	NDA	-0.49	0.441	0.792	NDA
7	B1WC0025S001	N/A	4/30/2010	252090	0.0983	0.0313	0.0377		0.024	0.0241	0.0393	NDA	-0.00941	0.457	0.791	NDA
8	B1WC0026S001	N/A	4/30/2010	252090	0.113	0.0354	0.0373		0.00828	0.0229	0.0416	NDA	-0.426	0.446	0.797	NDA
9	B1WC0035S001	N/A	6/17/2010	255147	0.0781	0.032	0.0357		0.00645	0.023	0.0407	NDA	0.036	0.366	0.663	NDA
10	B1WC0036S001	N/A	6/17/2010	255147	-0.0232	0.0215	0.0361	NDA	0.0102	0.0225	0.0393	NDA	0.0348	0.354	0.641	NDA
11	B1WC0037S001	N/A	6/17/2010	255147	-0.0023	0.0229	0.0404	NDA	0.00632	0.0237	0.0422	NDA	0.0517	0.352	0.635	NDA
12	B1WC0038S001	N/A	6/17/2010	255147	0.00584	0.0221	0.0399	NDA	-0.00221	0.0204	0.0373	NDA	-0.0172	0.346	0.635	NDA

	Cesium-137 (pCi/g)				Strontium-90 (pCi/g)				Tritium (pCi/g)			
	Activity	MDA	Non-detect?	Count	Activity	MDA	Non-detect?	Count	Activity	MDA	Non-detect?	Count
Average	0.062	0.037		12	0.012	0.038		12	-0.188	0.741		12
Maximum	0.158	0.044		12	0.037	0.043		12	0.052	0.797		12
Minimum	-0.023	0.028		12	-0.002	0.032		12	-0.490	0.635		12
Number of Non-Detects				5				12				12
% Non-Detects				42%				100%				100%

**Appendix 2**  
**Radionuclide Results**

ISRA Outfall 009 - B1-2

Project Name	Sampling Organization	Sampling Date	Sampling Location (General)	Sampling Location (Specific)	Sample Serial Number	Media Type	Isotope	Value	Error (+/-)	MDA	Non-Detect?	Units	Error Type	Analysis Protocol	Analysis Organization	Document	Status
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Americium-241	-0.0704	0.153	0.286	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Americium-241	0.0531	0.127	0.218	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Americium-241	0.00787	0.0703	0.116	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Americium-241	0.0308	0.033	0.0598	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Americium-241	0.00214	0.0729	0.123	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Americium-241	0.0366	0.0564	0.0973	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Americium-241	-0.118	0.0943	0.173	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Americium-241	-0.0954	0.0945	0.153	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Americium-241	0.0302	0.064	0.109	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Americium-241	0.145	0.103	0.178	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Americium-241	0.0424	0.103	0.174	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Americium-241	0.102	0.112	0.221	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Cesium-134	0.0524	0.0287	0.0547	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Cesium-134	0	0.0331	0.0482	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Cesium-134	0	0.0373	0.0466	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Cesium-134	0.0559	0.0446	0.0607	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Cesium-134	0.0327	0.0322	0.0438	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Cesium-134	0.0406	0.0301	0.0417	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Cesium-134	0	0.0408	0.0537	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Cesium-134	0	0.0397	0.0519	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Cesium-134	0	0.0359	0.0473	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Cesium-134	0	0.0486	0.0579	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Cesium-134	0	0.0442	0.0597	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Cesium-134	0	0.0407	0.05	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Cesium-137	-0.00076	0.0228	0.0407	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Cesium-137	0.0182	0.0208	0.0382	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Cesium-137	0.0535	0.0323	0.0314	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Cesium-137	0.108	0.0356	0.0442	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Cesium-137	0.158	0.0443	0.0284	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Cesium-137	0.133	0.0345	0.0287	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Cesium-137	0.0983	0.0313	0.0377	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Cesium-137	0.113	0.0354	0.0373	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Cesium-137	0.0781	0.032	0.0357	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste	
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Cesium-137	-0.0232	0.0215	0.0361	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Cesium-137	-0.0023	0.0229	0.0404	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Cesium-137	0.00584	0.0221	0.0399	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Cobalt-60	0.00831	0.0251	0.0432	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Cobalt-60	0.024	0.0205	0.0385	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Cobalt-60	0.0138	0.0208	0.0373	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Cobalt-60	0.0127	0.0235	0.043	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Cobalt-60	-0.00342	0.0189	0.0317	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Cobalt-60	0.0076	0.0155	0.0272	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Cobalt-60	-0.00652	0.0213	0.0362	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Cobalt-60	0.00669	0.0221	0.0393	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Cobalt-60	-0.00603	0.0192	0.0311	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Cobalt-60	0.0121	0.0213	0.0383	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Cobalt-60	-0.00464	0.0224	0.038	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Cobalt-60	-0.00373	0.0212	0.036	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Europium-152	0.0215	0.0908	0.114	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Europium-152	0.0158	0.0529	0.0841	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Europium-152	-0.042	0.0645	0.0841	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Europium-152	-0.0529	0.0544	0.0908	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Europium-152	-0.00544	0.0564	0.083	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Europium-152	-0.0441	0.0479	0.0705	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Europium-152	0.0289	0.0677	0.102	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Europium-152	0.0339	0.0586	0.0953	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Europium-152	-0.036	0.0495	0.0825	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Europium-152	-0.0223	0.0644	0.103	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Europium-152	0.0231	0.0605	0.101	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Europium-152	0.0218	0.0552	0.0942	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Europium-154	0.0155	0.0712	0.122	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Europium-154	-0.00849	0.0648	0.111	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Europium-154	-0.00364	0.0654	0.112	NDA	pCi					

ISRA Outfall 009 - B1-2

Project Name	Sampling Organization	Sampling Date	Sampling Location (General)	Sampling Location (Specific)	Sample Serial Number	Media Type	Isotope	Value	Error (+/-)	MDA	Non-Detect?	Units	Error Type	Analysis Protocol	Analysis Organization	Document	Status
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Europium-154	0.0615	0.0764	0.137	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Europium-154	0.00383	0.0608	0.105	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Europium-154	-0.0267	0.0554	0.0889	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Europium-154	0.0351	0.0717	0.128	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Europium-154	0.00512	0.0662	0.112	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Europium-154	0.0511	0.0612	0.109	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Europium-154	-0.0914	0.0704	0.111	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Europium-154	0.0566	0.073	0.133	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Europium-154	-0.023	0.0649	0.11	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Manganese-54	0.0207	0.0219	0.0402	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Manganese-54	-0.00814	0.0204	0.0343	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Manganese-54	0.0251	0.021	0.0377	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Manganese-54	-0.00808	0.024	0.0414	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Manganese-54	-0.00174	0.0184	0.0311	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Manganese-54	-0.00192	0.0156	0.0271	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Manganese-54	0.011	0.0206	0.0369	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Manganese-54	0.0286	0.0222	0.0373	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Manganese-54	-0.00245	0.0186	0.0322	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Manganese-54	0.035	0.0219	0.0383	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Manganese-54	0.00285	0.0213	0.0372	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Manganese-54	0.0189	0.0199	0.0364	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Potassium-40	19.3	2.09	0.281	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Potassium-40	20.2	2.13	0.317	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Potassium-40	21.4	2.05	0.261	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Potassium-40	21.2	2.14	0.36	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Potassium-40	14.5	1.49	0.27	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Potassium-40	17.7	1.71	0.237	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Potassium-40	21.9	2.5	0.294	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Potassium-40	20.2	2	0.261	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Potassium-40	22.6	2.14	0.269	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste	
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Potassium-40	24.2	2.76	0.323	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste	
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Potassium-40	22	2.19	0.313	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste	
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Potassium-40	22.7	2.3	0.311	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Sodium-22	0.00698	0.0249	0.0429	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Sodium-22	-0.00313	0.0227	0.0389	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Sodium-22	-0.000595	0.023	0.0393	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Sodium-22	0.0118	0.0276	0.048	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Sodium-22	0.00293	0.0212	0.0367	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Sodium-22	-0.00848	0.0194	0.0312	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Sodium-22	0.0118	0.0251	0.0449	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Sodium-22	0.00332	0.0232	0.0396	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Sodium-22	0.0151	0.0216	0.0381	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Sodium-22	-0.0318	0.0246	0.039	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Sodium-22	0.0264	0.0251	0.0468	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Sodium-22	-0.00392	0.0224	0.0384	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Strontium-90	-0.000999	0.0189	0.0382	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Strontium-90	0.0073	0.0185	0.0343	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Strontium-90	0.016	0.0211	0.0361	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Strontium-90	0.0368	0.025	0.0379	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Strontium-90	0.0294	0.021	0.0324	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Strontium-90	8.62E-06	0.0224	0.0425	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Strontium-90	0.024	0.0241	0.0393	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Strontium-90	0.00828	0.0229	0.0416	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Strontium-90	0.00645	0.023	0.0407	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Strontium-90	0.0102	0.0225	0.0393	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Strontium-90	0.00632	0.0237	0.0422	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Strontium-90	-0.00221	0.0204	0.0373	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Thorium-228	1.27	0.167	0.0647	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Thorium-228	1.17	0.143	0.0717	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Thorium-228	1.16	0.124	0.0507	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Thorium-228	1.08	0.132	0.0599	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Thorium-228	0.784	0.0908	0.0455	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Thorium-228	1.02	0.118	0.0425	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste	

## ISRA Outfall 009 - B1-2

Project Name	Sampling Organization	Sampling Date	Sampling Location (General)	Sampling Location (Specific)	Sample Serial Number	Media Type	Isotope	Value	Error (+/-)	MDA	Non-Detect?	Units	Error Type	Analysis Protocol	Analysis Organization	Document	Status
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Thorium-228	1.29	0.141	0.0556		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Thorium-228	0.948	0.116	0.0783		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Thorium-228	1.35	0.154	0.0501		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Thorium-228	1.4	0.151	0.0635		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Thorium-228	1.35	0.152	0.0598		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Thorium-228	1.21	0.144	0.0525		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Thorium-232	1.24	0.229	0.138		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Thorium-232	1.38	0.244	0.131		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Thorium-232	1.2	0.214	0.135		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Thorium-232	1.3	0.254	0.153		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Thorium-232	0.815	0.194	0.117		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Thorium-232	0.936	0.185	0.106		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Thorium-232	1.39	0.274	0.123		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Thorium-232	1.29	0.216	0.121		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Thorium-232	1.47	0.235	0.116		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Thorium-232	1.44	0.288	0.14		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Thorium-232	1.37	0.259	0.151		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Thorium-232	1.22	0.228	0.135		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Tritium	-0.18	0.455	0.797	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Tritium	-0.44	0.44	0.787	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Tritium	-0.199	0.454	0.797	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Tritium	-0.379	0.448	0.796	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Tritium	-0.238	0.428	0.756	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Tritium	-0.49	0.441	0.792	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Tritium	-0.00941	0.457	0.791	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Tritium	-0.426	0.446	0.797	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Tritium	0.036	0.366	0.663	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Tritium	0.0348	0.354	0.641	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Tritium	0.0517	0.352	0.635	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Tritium	-0.0172	0.346	0.635	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Uranium-235	-0.016	0.143	0.244	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Uranium-235	-0.00723	0.11	0.188	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Uranium-235	0.0313	0.107	0.188	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Uranium-235	0.0276	0.11	0.194	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Uranium-235	0.035	0.0992	0.17	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Uranium-235	-0.00359	0.0963	0.166	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Uranium-235	0.0131	0.129	0.225	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Uranium-235	0.0806	0.112	0.205	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Uranium-235	0.0639	0.11	0.191	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Uranium-235	0.0795	0.136	0.238	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Uranium-235	-0.0818	0.124	0.22	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Uranium-235	0.096	0.109	0.2	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0019	B1WC0019S001	Soil	Uranium-238	0.424	1.27	2.31	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0020	B1WC0020S001	Soil	Uranium-238	2.23	1.4	1.71		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0021	B1WC0021S001	Soil	Uranium-238	1.02	0.772	1.04	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0022	B1WC0022S001	Soil	Uranium-238	1.04	0.505	0.592		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0023	B1WC0023S001	Soil	Uranium-238	1.02	1.03	1.05	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0024	B1WC0024S001	Soil	Uranium-238	0.788	0.686	0.843	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0025	B1WC0025S001	Soil	Uranium-238	1.24	0.885	1.62	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	4/30/2010	B1-2	B1WC0026	B1WC0026S001	Soil	Uranium-238	1.15	1.1	1.31	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	252090	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0035	B1WC0035S001	Soil	Uranium-238	0.97	0.764	0.976	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0036	B1WC0036S001	Soil	Uranium-238	1.37	1.18	1.51	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0037	B1WC0037S001	Soil	Uranium-238	1.8	1.59	1.4		pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste
2010 ISRA Waste Characterization	MWH	6/17/2010	B1-2	B1WC0038	B1WC0038S001	Soil	Uranium-238	1.12	0.968	1.84	NDA	pCi/g	2 sigma	DOE HASL 300, 4.5.2.3/Ga-01-R	GEL	255147	Waste



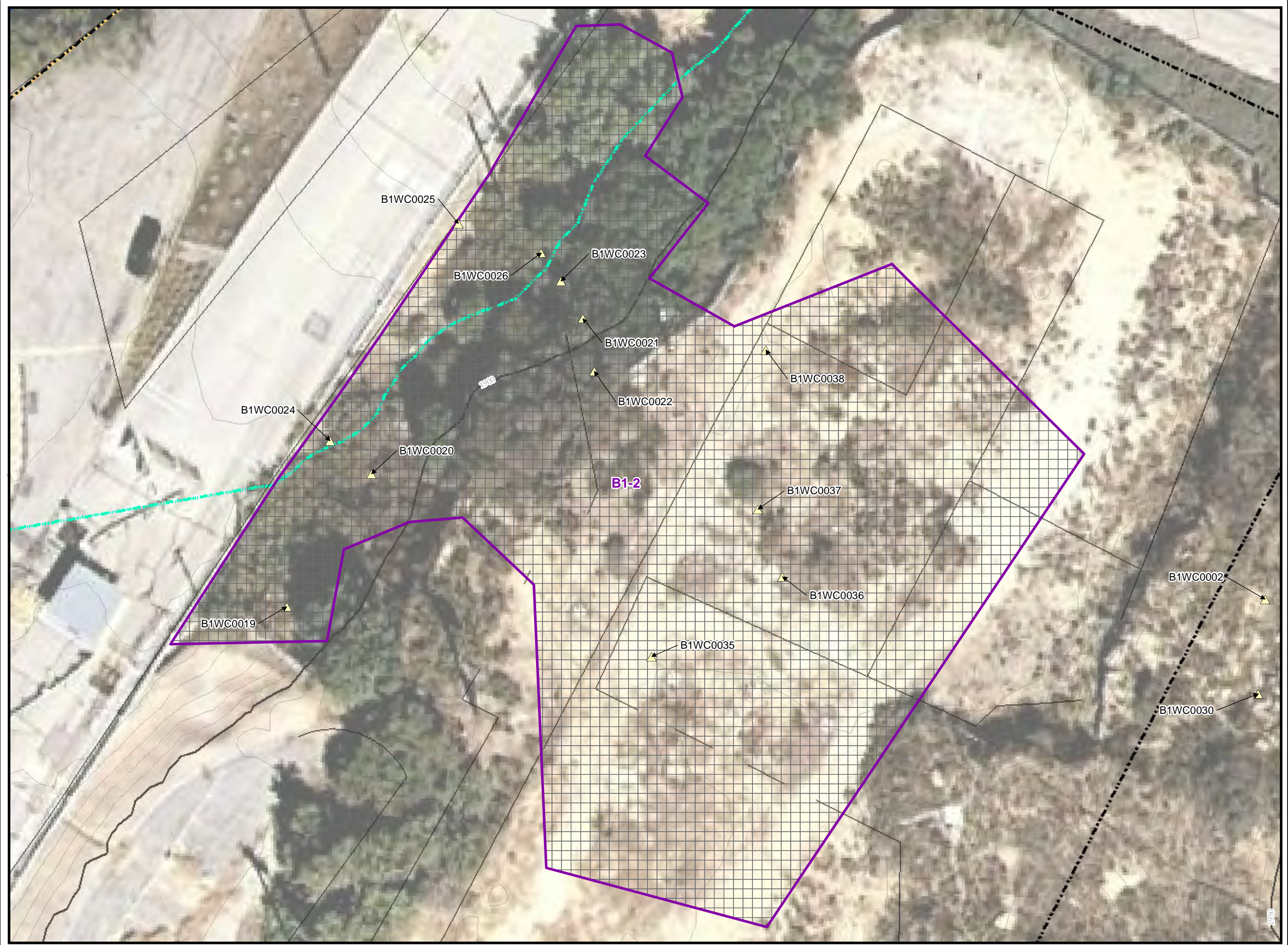
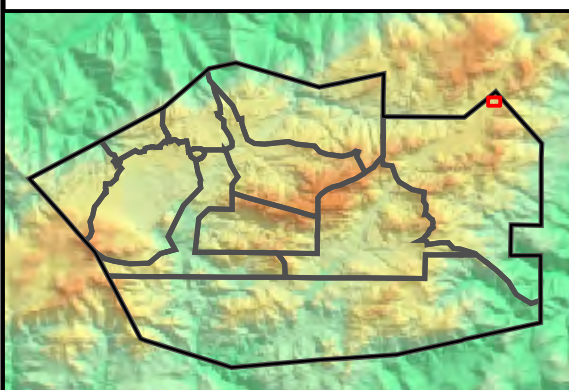
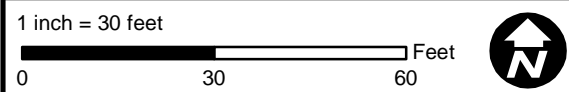
# Outfall 009 Waste Characterization Sample Locations for B1-2

- Base Map Legend**
- Administrative Area Boundary
  - RFI Site Boundary
  - Report Group Boundary
  - NPDES Outfall
  - A/C Paving
  - Drainage
  - Non Jurisdictional Surface Water Pathway
  - Surface Water Divide
  - Elevation Contour

- Base Map Legend**
- ISRA Excavation Boundary
  - Waste Characterization Sample Location

- Note:**
1. Sample locations and depths were randomly selected. The 3ft x 3ft grid used in the sample location selection process is shown.
  2. Aerial imagery from Google Earth, 2010.
  3. Topographic contours from Lidar data, 2008.

Document: ISRA\_Plots\_SP\_B1-2\_SampleLocations\_062110\_WC.mxd Date: Jun 21, 2010



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FIGURE 1