Area II Landfill Interim Source Removal Action (ISRA).
Soil Sampling for Radionuclides.
Results and Statistical Analysis.
Waste Certification.

This data package provides the laboratory results and statistical analysis of pre-excavation samples taken from the Area II Landfill Interim Source Removal Action (ISRA) area. This analysis and data interpretation complies with procedures approved by the California Department of Public Health[1].

Eight (8) 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 ~0.044 pCi/g and ~0.040 pCi/g respectively. Minimum detectable activity for tritium averaged 0.82 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. Laboratory data packages are available on request.

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[2] and DTSC guidance[3] (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[4]. 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)[5] for residential 10^{-6} risk.

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[1] 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.

[2] 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

[3] DTSC, “Selecting Inorganic Constituents as Chemicals of Concern at Risk Assessments at Hazardous Waste Sites and Permitted Facilities.” February 1997.

[4] 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

[5] EPA preliminary remediation goals for radionuclides - http://epa-prgs.ornl.gov/radionuclides/.

Conclusions

Cesium-137 - Based on the results of the statistical analysis of Appendix 1, soil to be excavated from the Area II Landfill ISRA area 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 0.178 pCi/g which is less than the highest background result. The highest non-background subtracted Cs-137 result is equivalent to an effective dose of 0.125 mrem/y[6].

Strontium-90 - Based on the results of the statistical analysis of Appendix 1, soil to be excavated from the Area II Landfill ISRA area does not exceed the local background for Sr-90. The incremental dose from Sr-90 above background is therefore zero mrem/y. The highest Sr-90 result is 0.029 pCi/g which is less than the highest background result. The highest non-background subtracted Sr-90 result is equivalent to an effective dose of 0.0089 mrem/y[6].

Tritium - All tritium results are non-detect, the average tritium result is -0.31 pCi/g and the highest non-detect tritium result is -0.136 pCi/g. The highest non-detect, non-background subtracted tritium result is equivalent to an effective dose of 0.0 mrem/y[6].

This waste is certified to be "radiologically" acceptable for shipment to, and disposal at, any Class 1, 2 or 3 disposal facility. There are no radiological controls or restrictions imposed on future disposition or use of this soil.

This waste meets the requirements of disposal facility permits[7,8] and complies with the California Health & Safety Code[9].

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 the Area II Landfill ISRA area

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[6] EPA dose compliance concentrations for radionuclides - http://epa-dccs.ornl.gov/.
Soil concentrations that meet the 10^{-6} 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.

[7] This waste is exempt from regulation and licensing or is expressly authorized for disposal under the Radiation Control Law (Division 104, Part 9, Chapter 5 of the California Health & Safety Code).

[8] This waste is not prohibited from disposal by any government agency with jurisdictional authority over this waste.

[9] 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

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 also 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[10].

Phil Rutherford
Manager, Health, Safety & Radiation Services

[10] 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 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, 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)	0.12
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:	8
Z-value for Alpha	1.645
Critical Value	1604
Sum of Reference Ranks	1714

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 alterrnative 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	0.087	0.090
Max	0.213	0.178
Min	0.015	-0.018
σ	0.062	0.069
m-1.96*σ	-0.035	-0.046
m+1.96*σ	0.210	0.225

No.	Soil ID	Cs-137	Adjusted Cs-137	Area	Ranks	Reference Ranks
1		0.092	0.217	R	36	36
2		0.020	0.145	R	14	14
3		0.020	0.145	R	14	14
4		0.100	0.225	R	40.5	40.5
5		0.020	0.145	R	14	14
6		0.158	0.283	R	51.5	51.5
7		0.175	0.300	R	53	53
8		0.209	0.334	R	58	58
9		0.180	0.305	R	54	54
10		0.030	0.155	R	22	22
11		0.213	0.338	R	59	59
12		0.025	0.150	R	19	19
13		0.020	0.145	R	14	14
14		0.020	0.145	R	14	14
15		0.074	0.199	R	32	32
16		0.147	0.272	R	47	47
17		0.100	0.225	R	40.5	40.5
18		0.067	0.192	R	30.5	30.5
19		0.099	0.224	R	39	39

No.	Soil ID	Cs-137	Adjusted Cs-137	Area	Ranks	Reference Ranks
20		0.101	0.226	R	42	42
21		0.148	0.273	R	48	48
22		0.153	0.278	R	50	50
23		0.025	0.150	R	19	19
24		0.188	0.313	R	55	55
25		0.198	0.323	R	57	57
26		0.030	0.155	R	22	22
27		0.079	0.204	R	33	33
28		0.158	0.283	R	51.5	51.5
29		0.109	0.234	R	43	43
30		0.059	0.184	R	29	29
31		0.067	0.192	R	30.5	30.5
32		0.113	0.238	R	44	44
33		0.015	0.140	R	9	9
34		0.031	0.156	R	24	24
35		0.042	0.167	R	27	27
36		0.097	0.222	R	37.5	37.5
37		0.015	0.140	R	9	9
38		0.020	0.145	R	14	14
39		0.085	0.210	R	35	35
40		0.080	0.205	R	34	34
41		0.015	0.140	R	9	9
42		0.020	0.145	R	14	14
43		0.035	0.160	R	25.5	25.5
44		0.035	0.160	R	25.5	25.5
45		0.025	0.150	R	19	19
46		0.150	0.275	R	49	49
47		0.140	0.265	R	45.5	45.5
48		0.190	0.315	R	56	56
49		0.097	0.222	R	37.5	37.5
50		0.030	0.155	R	22	22
51		0.140	0.265	R	45.5	45.5
52	ISWC0104RadS001	0.122	0.122	S	4	0
53	ISWC0105RadS001	0.123	0.123	S	5	0
54	ISWC0106RadS001	-0.018	-0.018	S	1	0
55	ISWC0107RadS001	0.025	0.025	S	3	0
56	ISWC0108RadS001	0.134	0.134	S	7	0
57	ISWC0109RadS001	0.128	0.128	S	6	0
58	ISWC0110RadS001	0.178	0.178	S	28	0
59	ISWC0111RadS001	0.024	0.024	S	2	0
				Sum	1770	1714

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)	0.06
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:	8
Z-value for Alpha	1.645
Critical Value	1604
Sum of Reference Ranks	1734

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 alterrnative 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	0.013
Max	0.130	0.029
Min	0.005	0.004
σ	0.030	0.010
m-1.96*σ	-0.008	-0.007
m+1.96*σ	0.109	0.033

No.	Soil ID	Sr-90	Adjusted Sr-90	Area	Ranks	Reference Ranks
1		0.030	0.090	R	20	20
2		0.010	0.070	R	10.5	10.5
3		0.045	0.105	R	34.5	34.5
4		0.045	0.105	R	34.5	34.5
5		0.050	0.110	R	44	44
6		0.040	0.100	R	26	26
7		0.035	0.095	R	22.5	22.5
8		0.050	0.110	R	44	44
9		0.050	0.110	R	44	44
10		0.130	0.190	R	58.5	58.5
11		0.120	0.180	R	57	57
12		0.040	0.100	R	26	26
13		0.045	0.105	R	34.5	34.5
14		0.130	0.190	R	58.5	58.5
15		0.050	0.110	R	44	44
16		0.088	0.148	R	52	52
17		0.080	0.140	R	49	49
18		0.100	0.160	R	56	56
19		0.069	0.129	R	48	48
20		0.097	0.157	R	54	54
21		0.084	0.144	R	51	51

No.	Soil ID	Sr-90	Adjusted Sr-90	Area	Ranks	Reference Ranks
22		0.098	0.158	R	55	55
23		0.045	0.105	R	34.5	34.5
24		0.045	0.105	R	34.5	34.5
25		0.020	0.080	R	14	14
26		0.045	0.105	R	34.5	34.5
27		0.089	0.149	R	53	53
28		0.050	0.110	R	44	44
29		0.045	0.105	R	34.5	34.5
30		0.050	0.110	R	44	44
31		0.045	0.105	R	34.5	34.5
32		0.040	0.100	R	26	26
33		0.045	0.105	R	34.5	34.5
34		0.045	0.105	R	34.5	34.5
35		0.045	0.105	R	34.5	34.5
36		0.025	0.085	R	17.5	17.5
37		0.082	0.142	R	50	50
38		0.045	0.105	R	34.5	34.5
39		0.040	0.100	R	26	26
40		0.035	0.095	R	22.5	22.5
41		0.025	0.085	R	17.5	17.5
42		0.005	0.065	R	9	9
43		0.020	0.080	R	14	14
44		0.010	0.070	R	10.5	10.5
45		0.020	0.080	R	14	14
46		0.020	0.080	R	14	14
47		0.050	0.110	R	44	44
48		0.030	0.090	R	20	20
49		0.030	0.090	R	20	20
50		0.020	0.080	R	14	14
51		0.040	0.100	R	26	26
52	ISWC0104RadS001	0.008	0.008	S	5	0
53	ISWC0105RadS001	0.029	0.029	S	8	0
54	ISWC0106RadS001	0.027	0.027	S	7	0
55	ISWC0107RadS001	0.005	0.005	S	2	0
56	ISWC0108RadS001	0.017	0.017	S	6	0
57	ISWC0109RadS001	0.004	0.004	S	1	0
58	ISWC0110RadS001	0.007	0.007	S	4	0
59	ISWC0111RadS001	0.007	0.007	S	3	0
				Sum	1770	1734

Soil Data from Area II Landfill ISRA

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	ISWC0104RadS001	N/A	9/3/2009	236678	0.122	0.0529	0.0437		0.00767	0.0224	0.0415	NDA	-0.136	0.51	0.915	NDA
2	ISWC0105RadS001	N/A	9/3/2009	236678	0.123	0.0418	0.0459		0.0287	0.0245	0.0393	NDA	-0.486	0.486	0.909	NDA
3	ISWC0106RadS001	N/A	9/3/2009	236678	-0.0176	0.0223	0.0368	NDA	0.0273	0.0272	0.0443	NDA	-0.365	0.493	0.908	NDA
4	ISWC0107RadS001	N/A	9/3/2009	236678	0.0254	0.0233	0.042	NDA	0.00488	0.0207	0.0398	NDA	-0.368	0.498	0.917	NDA
5	ISWC0108RadS001	N/A	9/3/2009	236678	0.134	0.0496	0.0536		0.0172	0.0223	0.0381	NDA	-0.222	0.517	0.934	NDA
6	ISWC0109RadS001	N/A	9/3/2009	236678	0.128	0.0389	0.0373		0.00413	0.021	0.0405	NDA	-0.411	0.499	0.922	NDA
7	ISWC0110RadS001	N/A	9/3/2009	236678	0.178	0.0445	0.0465		0.00741	0.0162	0.0295	NDA	-0.325	0.497	0.91	NDA
8	ISWC0111RadS001	N/A	9/3/2009	236678	0.0244	0.0243	0.0449	NDA	0.00713	0.0234	0.0443	NDA	-0.165	0.516	0.927	NDA

	Cesium-137 (pCi/g)				Strontium-90 (pCi/g)				Tritium (pCi/g)			
	Activity		MDA	Non-detect?	Activity		MDA	Non-detect?	Activity		MDA	Non-detect?
Average	0.090		0.044		0.013		0.040		-0.310		0.918	
Maximum	0.178		0.054		0.029		0.044		-0.136		0.934	
Minimum	-0.018		0.037		0.004		0.030		-0.486		0.908	
Count				8				8				8
Number of Non-Detects				3				8				8
% Non-Detects				38%				100%				100%

Appendix 2

Analytical Radionuclide Results

ISRA Soil Sample Results for Area II Landfill

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
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Americium-241	-0.0227	0.182	0.336	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Americium-241	0.0143	0.118	0.203	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Americium-241	-0.00775	0.128	0.239	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Americium-241	-0.0246	0.0843	0.144	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Americium-241	0.048	0.0399	0.0699	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Americium-241	0.137	0.11	0.183	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Americium-241	0.0921	0.106	0.173	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Americium-241	0.0779	0.112	0.187	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Cesium-134	0	0.0483	0.0636	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Cesium-134	0	0.0425	0.061	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Cesium-134	0	0.0311	0.0556	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Cesium-134	0	0.0451	0.0531	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Cesium-134	0.0442	0.0366	0.0673	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Cesium-134	0.0383	0.0374	0.0531	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Cesium-134	0	0.0413	0.0616	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Cesium-134	0	0.0296	0.0572	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Cesium-137	0.122	0.0529	0.0437		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Cesium-137	0.123	0.0418	0.0459		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Cesium-137	-0.0176	0.0223	0.0368	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Cesium-137	0.0254	0.0233	0.042	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Cesium-137	0.134	0.0496	0.0536		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Cesium-137	0.128	0.0389	0.0373		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Cesium-137	0.178	0.0445	0.0465		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Cesium-137	0.0244	0.0243	0.0449	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Cobalt-60	-0.0118	0.0242	0.0384	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Cobalt-60	0.00764	0.0259	0.0448	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Cobalt-60	0.0118	0.0242	0.043	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Cobalt-60	0.000442	0.0236	0.0401	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Cobalt-60	0.00422	0.0301	0.0519	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Cobalt-60	-0.0123	0.0248	0.0397	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Cobalt-60	0.0181	0.0226	0.0411	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Cobalt-60	-0.00352	0.0241	0.041	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Europium-152	0.024	0.0994	0.123	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Europium-152	-0.0542	0.0719	0.0981	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Europium-152	-0.0644	0.061	0.0886	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Europium-152	-0.0671	0.0547	0.0882	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Europium-152	0.0286	0.0795	0.123	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Europium-152	-0.0016	0.0634	0.0971	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Europium-152	-0.0339	0.0836	0.11	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Europium-152	-0.0347	0.0682	0.102	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Europium-154	-0.0829	0.0862	0.133	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Europium-154	-0.0272	0.0794	0.132	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Europium-154	-0.0598	0.0695	0.112	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Europium-154	-0.0816	0.0776	0.12	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Europium-154	0.0163	0.0975	0.169	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Europium-154	0.0131	0.0697	0.119	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Europium-154	-0.0692	0.0695	0.109	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Europium-154	-0.0589	0.0734	0.119	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Lead-214	1.07	0.136	0.0868		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Lead-214	1.13	0.144	0.0748		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Lead-214	0.916	0.113	0.0695		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Lead-214	0.918	0.106	0.0721		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Lead-214	0.981	0.12	0.0708		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Manganese-54	-0.00929	0.0253	0.043	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Manganese-54	-0.00354	0.0239	0.0403	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Manganese-54	-0.00153	0.0208	0.0357	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Manganese-54	-0.0271	0.0231	0.0366	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Manganese-54	0.0429	0.0292	0.054	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Manganese-54	0.00149	0.0228	0.0396	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Manganese-54	0.00378	0.0235	0.04	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Manganese-54	0.00084	0.0234	0.0405	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Potassium-40	22.4	1.99	0.376		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Potassium-40	22.3	1.94	0.368		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Potassium-40	23.4	2.23	0.294		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Potassium-40	21.8	1.82	0.267		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial

ISRA Soil Sample Results for Area II Landfill

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
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Potassium-40	21.6	1.68	0.388		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Potassium-40	22	2.07	0.315		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Potassium-40	22	1.91	0.328		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Potassium-40	21	1.8	0.345		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Sodium-22	-0.03	0.0307	0.0474	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Sodium-22	-0.0099	0.0283	0.0468	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Sodium-22	-0.0291	0.0253	0.0397	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Sodium-22	-0.0294	0.0276	0.0428	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Sodium-22	0.00484	0.0347	0.0601	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Sodium-22	0.0045	0.0248	0.0422	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Sodium-22	-0.0266	0.0249	0.0388	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Sodium-22	-0.0202	0.0262	0.0426	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Strontium-90	0.00767	0.0224	0.0415	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Strontium-90	0.0287	0.0245	0.0393	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Strontium-90	0.0273	0.0272	0.0443	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Strontium-90	0.00488	0.0207	0.0398	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Strontium-90	0.0172	0.0223	0.0381	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Strontium-90	0.00413	0.021	0.0405	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Strontium-90	0.00741	0.0162	0.0295	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Strontium-90	0.00713	0.0234	0.0443	NDA	pCi/g	2 sigma	EPA 905.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Thorium-228	1.53	0.147	0.0692		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Thorium-228	1.53	0.16	0.0599		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Thorium-228	1.47	0.127	0.0527		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Thorium-228	1.4	0.117	0.0516		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Thorium-228	1.45	0.151	0.0628		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Thorium-228	1.38	0.114	0.0548		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Thorium-228	1.41	0.124	0.0638		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Thorium-228	1.37	0.121	0.0598		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Thorium-232	1.55	0.259	0.147		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Thorium-232	1.6	0.27	0.138		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Thorium-232	1.58	0.277	0.12		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Thorium-232	1.35	0.234	0.125		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Thorium-232	1.37	0.248	0.168		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Thorium-232	1.29	0.226	0.135		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Thorium-232	1.64	0.268	0.143		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Thorium-232	1.41	0.232	0.115		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Tritium	-0.136	0.51	0.915	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Tritium	-0.486	0.486	0.909	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Tritium	-0.365	0.493	0.908	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Tritium	-0.368	0.498	0.917	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Tritium	-0.222	0.517	0.934	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Tritium	-0.411	0.499	0.922	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Tritium	-0.325	0.497	0.91	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Tritium	-0.165	0.516	0.927	NDA	pCi/g	2 sigma	EPA 906.0 Modified	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Uranium-235	0.103	0.153	0.275	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Uranium-235	-0.106	0.141	0.233	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Uranium-235	0.0594	0.126	0.217	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Uranium-235	0.0255	0.12	0.206	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Uranium-235	0.252	0.195	0.229		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Uranium-235	0.0801	0.142	0.241	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Uranium-235	0.126	0.165	0.244	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Uranium-235	0.0967	0.175	0.227	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0104	ISWC0104RadS001	Soil	Uranium-238	-1.17	1.44	2.51	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0105	ISWC0105RadS001	Soil	Uranium-238	1.52	1.58	1.6	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0106	ISWC0106RadS001	Soil	Uranium-238	0.215	1.04	1.88	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0107	ISWC0107RadS001	Soil	Uranium-238	1.34	1.17	1.28		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0108	ISWC0108RadS001	Soil	Uranium-238	0.777	0.727	0.685		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0109	ISWC0109RadS001	Soil	Uranium-238	1.06	0.885	1.48	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0110	ISWC0110RadS001	Soil	Uranium-238	2.96	1.61	1.43		pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial
ISRA Waste Characterization	MWH	9/3/2009	A2LF	ISWC0111	ISWC0111RadS001	Soil	Uranium-238	1.24	1.29	1.52	NDA	pCi/g	2 sigma	EML HASL 300, 4.5.2.3	GEL	236678	Pre-remedial