



Memo

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To: Vance Atkins, QA/QC Manager **Info:** DRAFT

From: Jennifer Garner, Chemist **Date:** November 28, 2005

SUBJECT: **Summary Data Quality Review**
Maralco Restoration Project
Kent, Washington
October 2005

The summary data quality review of 44 discrete gross samples and 7 composite gross samples collected between October 19 and 21, 2005 has been completed. The samples were analyzed at North Creek Analytical (NCA) laboratories located in Bothell and Spokane, Washington for total metals (copper, nickel, potassium, sodium, and zinc) by EPA Methods 6010B and 6020, Toxic Characteristics Leaching Procedure (TCLP) metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) by EPA Methods 1311, 6010B, and 7470A, ammonia by EPA Method 350.3, chloride by EPA Method 300.0, total cyanide by EPA Method 9010B-modified, ignitability by EPA Method 1010, pH by EPA Method 9045C, and/or total sulfide by EPA Method 9030B as described below. The analyses were performed in general accordance with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846), Update IIIB*, April 1998 and *Methods for Chemical Analysis of Water and Wastes*, March 1983. The laboratory provided a summary report containing sample results and associated QA/QC data for all samples. The following samples are associated with NCA sample delivery groups (SDGs) B5J0381, B5J0426, and B5J0465:

Sample ID	NCA ID	Requested Analyses
B-1-S	B5J0381-01	Total Metals, TCLP Metals, Ammonia, Chloride
B-1-D	B5J0381-02	Total Metals, TCLP Metals, Ammonia, Chloride
B-2-S	B5J0381-03	Total Metals, TCLP Metals, Ammonia, Chloride
B-2-D	B5J0381-04	Total Metals, TCLP Metals, Ammonia, Chloride
B-3-S	B5J0381-05	Total Metals, TCLP Metals, Ammonia, Chloride
B-3-D	B5J0381-06	Total Metals, TCLP Metals, Ammonia, Chloride
B-4-S	B5J0381-07	Total Metals, TCLP Metals, Ammonia, Chloride
B-4-M	B5J0381-08	Total Metals, TCLP Metals, Ammonia, Chloride
B-4-D	B5J0381-09	Total Metals, TCLP Metals, Ammonia, Chloride
B-5-S	B5J0381-10	Total Metals, TCLP Metals, Ammonia, Chloride
B-5-D	B5J0381-11	Total Metals, TCLP Metals, Ammonia, Chloride
B-8-S	B5J0381-12	Total Metals, TCLP Metals, Ammonia, Chloride
B-8-M	B5J0381-13	Total Metals, TCLP Metals, Ammonia, Chloride
Sample ID	NCA ID	Requested Analyses

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B-8-D	B5J0381-14	Total Metals, TCLP Metals, Ammonia, Chloride
COMP-1	B5J0381-15	Total Cyanide, Ignitability, pH, Total Sulfide
COMP-2	B5J0381-16	Total Cyanide, Ignitability, pH, Total Sulfide
B-19-S (Field Duplicate of B-1-S)	B5J0381-17	Total Metals, TCLP Metals, Ammonia, Chloride
B-20-S (Field Duplicate of B-7-M)	B5J0426-01	Total Metals, TCLP Metals, Ammonia, Chloride
B-7-S	B5J0426-02	Total Metals, TCLP Metals, Ammonia, Chloride
B-7-M	B5J0426-03	Total Metals, TCLP Metals, Ammonia, Chloride
B-7-D	B5J0426-04	Total Metals, TCLP Metals, Ammonia, Chloride
B-6-S	B5J0426-05	Total Metals, TCLP Metals, Ammonia, Chloride
B-6-M	B5J0426-06	Total Metals, TCLP Metals, Ammonia, Chloride
B-9-S	B5J0426-07	Total Metals, TCLP Metals, Ammonia, Chloride
B-9-M	B5J0426-08	Total Metals, TCLP Metals, Ammonia, Chloride
B-10-S	B5J0426-09	Total Metals, TCLP Metals, Ammonia, Chloride
B-10-M	B5J0426-10	Total Metals, TCLP Metals, Ammonia, Chloride
COMP-3	B5J0426-11	Total Cyanide, Ignitability, pH, Total Sulfide
B-11-S	B5J0426-12	Total Metals, TCLP Metals, Ammonia, Chloride
B-11-M	B5J0426-13	Total Metals, TCLP Metals, Ammonia, Chloride
COMP-4	B5J0426-14	Total Cyanide, Ignitability, pH, Total Sulfide
COMP-5	B5J0426-15	Total Cyanide, Ignitability, pH, Total Sulfide
B-12-S	B5J0465-01	Total Metals, TCLP Metals, Ammonia, Chloride
B-12-M	B5J0465-02	Total Metals, TCLP Metals, Ammonia, Chloride
B-12-D	B5J0465-03	Total Metals, TCLP Metals, Ammonia, Chloride
B-13-S	B5J0465-04	Total Metals, TCLP Metals, Ammonia, Chloride
B-13-D	B5J0465-05	Total Metals, TCLP Metals, Ammonia, Chloride
B-14-S	B5J0465-06	Total Metals, TCLP Metals, Ammonia, Chloride
B-14-D	B5J0465-07	Total Metals, TCLP Metals, Ammonia, Chloride
B-15-S	B5J0465-08	Total Metals, TCLP Metals, Ammonia, Chloride
B-15-D	B5J0465-09	Total Metals, TCLP Metals, Ammonia, Chloride
B-18-S	B5J0465-10	Total Metals, TCLP Metals, Ammonia, Chloride
B-17-S	B5J0465-11	Total Metals, TCLP Metals, Ammonia, Chloride
B-17-M	B5J0465-12	Total Metals, TCLP Metals, Ammonia, Chloride
B-17-D	B5J0465-13	Total Metals, TCLP Metals, Ammonia, Chloride
B-16-S	B5J0465-14	Total Metals, TCLP Metals, Ammonia, Chloride
B-16-M	B5J0465-15	Total Metals, TCLP Metals, Ammonia, Chloride
B-16-D	B5J0465-16	Total Metals, TCLP Metals, Ammonia, Chloride
B-21-S (Field Duplicate of B-15-D)	B5J0465-17	Total Metals, TCLP Metals, Ammonia, Chloride
COMP-6	B5J0465-18	Total Cyanide, Ignitability, pH, Total Sulfide
COMP-7	B5J0465-19	Total Cyanide, Ignitability, pH, Total Sulfide

Upon receipt by NCA-Bothell, the sample jar information was compared to the chain-of-custody. No discrepancies relating to sample identification were noted by NCA-Bothell. The cooler temperatures associated with these samples exceeded the EPA-recommended limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 16.0°C , and 9.5°C . A cooler temperature was not recorded for samples associated with SDG B5J0465. Data were not qualified based on cooler temperatures. Samples for ignitability analysis were shipped to NCA-Spokane.

Upon receipt by NCA-Spokane, the sample jar information was compared to the chain-of-custody. No discrepancies relating to sample identification were noted by NCA-Spokane and the cooler temperatures were within the EPA-recommended limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

**Summary Data Quality Review
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October 2005**

Data validation is based on method performance criteria and QC criteria documented in *the Sampling and Analysis Plan/Quality Assurance Project Plan (Study Plan), Maralco Restoration Project, 7730 South 202nd Street, Kent, Washington*, dated September 2005. Hold times, field and method blanks, matrix spike/matrix spike duplicate recoveries, laboratory duplicate results, blank spike recoveries (laboratory control samples), and reporting limits were reviewed to assess compliance with applicable methods and criteria documented in the Study Plan. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA document *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Data Review*, July 2002. A summary of qualifiers assigned to results in this SDG is included in Table 1. Qualifiers that may be assigned to results in this SDG include:

- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Metals Analyses

Samples were analyzed for total metals and TCLP metals by the methods described in the introduction to this report.

1. Holding Times – Acceptable
2. Blanks – Acceptable except as noted below:

Total Metals by Methods 6010B and 6020 – Potassium (39.4 mg/kg) was detected in the method blank associated with samples B-15-D, B-18-S, B-17-S, B-17-M, B-17-D, B-16-S, B-16-M, B-16-D, and B-21-S. Per CLP guidelines, analytes detected in samples that are also detected in blanks are qualified if the sample concentration is less than ten times (10x) the blank concentration. The concentrations for potassium in the samples described above were more than 10x the method blank concentration; therefore, data were not qualified based on the method blank result.

3. Laboratory Control/Laboratory Control Duplicate Samples (LCS/LCSD) – Acceptable

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4. Matrix Spike / Matrix Spike Duplicates (MS/MSD) – Acceptable except as noted below:

Total Metals by Methods 6010B and 6020 – A MS/MSD and post-digestion spike (PDS) were performed on sample B-3-S. The percent recoveries for one or more metals were outside the control limits specified in the Study Plan of 80-120% as indicated below:

Analyte	MS % Recovery	MSD % Recovery	PDS % Recovery	RPD
Copper	16.1%	-32.2%	139%	OK
Zinc	209%	OK	69%	OK
Potassium	288%	274%	70%	OK
Sodium	213%	368%	64%	OK

OK – Result Acceptable
 RPD – Relative Percent Difference

The native sample concentrations for copper, zinc, potassium, and sodium in sample B-3-S were more than four times (4x) the spike concentration; therefore, data were not qualified for copper, zinc, potassium, and sodium based on these MS/MSD/PDS results.

A MS/MSD/PDS was performed on sample B-10-S. The percent recoveries for one or more metals were outside the control limits specified in the Study Plan as indicated below:

Analyte	MS % Recovery	MSD % Recovery	PDS % Recovery	RPD
Nickel	73.1%	OK	OK	OK
Copper	-213%	-21.3%	OK	OK
Zinc	-61.8%	64.0%	OK	OK

The native sample concentrations for copper and zinc in sample B-10-S were more than four times (4x) the spike concentration; therefore, data were not qualified for copper and zinc based on these MS/MSD/PDS results. As the percent recoveries in the MSD and PDS and the RPD were acceptable, data were not qualified for nickel based on the percent recovery in the MS.

A MS/MSD/PDS was performed on sample B-20-S. The percent recoveries for one or more metals and/or the RPD were outside the control limits specified in the Study Plan as indicated below:

Analyte	MS % Recovery	MSD % Recovery	PDS % Recovery	RPD
Potassium	-3480%	1870%	-700%	22.5%
Sodium	-1040%	2730%	400%	OK

The native sample concentrations for potassium and sodium in sample B-20-S were more than four times (4x) the spike concentration; therefore, data were not qualified for potassium and sodium based on these MS/MSD/PDS results.

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A MS/MSD/PDS was performed on sample B-18-S. The percent recoveries for one or more metals were outside the control limits specified in the Study Plan as indicated below:

<u>Analyte</u>	<u>MS</u> <u>% Recovery</u>	<u>MSD</u> <u>% Recovery</u>	<u>PDS</u> <u>% Recovery</u>	<u>RPD</u>
Copper	213%	178%	267%	OK
Zinc	888%	782%	440%	OK
Potassium	797%	549%	40%	OK
Sodium	536%	278%	64%	OK

The native sample concentrations for copper, zinc, potassium, and sodium in sample B-18-S were more than four times (4x) the spike concentration; therefore, data were not qualified for copper, zinc, potassium, and sodium based on these MS/MSD/PDS results.

A MS/MSD was performed on a sample from a n unrelated project. The percent recovery for zinc (128%) exceeded the control limits specified in the Study Plan. Data were not qualified based on non-project QA/QC.

TCLP Metals by Methods 1311/6010B/7470A – MS/MSDs were performed on samples B-3-S, B-4-S, B-18-S, B-20-S, and B-12-S. Results were acceptable.

5. Field Duplicates – Acceptable except as noted below:

General – Field duplicates were collected for B-1-S, B-7-M, and B-15-D and identified as B-19-S, B-20-S, and B-21-S, respectively. Results were comparable except as noted in the following paragraphs.

Total Metals by Methods 6010B and 6020 – The RPDs for nickel (80%), copper (87%), and zinc (96%) in the parent sample /field duplicate pair B-1-S / B-19-S were more than 35%. The results for nickel, copper, and zinc in samples B-1-S and B-19-S are qualified as estimated and flagged with a ‘J’ based on the field duplicate results.

The RPDs for copper (60%) and zinc (36%) in the parent sample /field duplicate pair B-7-M / B-20-S were more than 35%. The results for copper and zinc in samples B-7-M and B-20-S are qualified as estimated and flagged with a ‘J’ based on the field duplicate results.

The RPD for zinc (43%) in the parent sample /field duplicate pair B-15-D / B-21-S was more than 35%. The results for zinc in samples B-15-D and B-21-S are qualified as estimated and flagged with a ‘J’ based on the field duplicate results.

6. Reporting Limits – Acceptable except as noted below:

TCLP Metals by Methods 1311/6010B/7470A – The reporting limits for arsenic, chromium, mercury, lead, and selenium exceeded the reporting limits specified in the Study Plan. The elevated reporting limits are below Washington State Dangerous Waste Characterization Criteria and do not affect the use of the data for regulatory comparison.

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General Chemistry Parameters

Samples were analyzed for ammonia, chloride, total cyanide, ignitability, pH, and total sulfide by the methods described in the introduction to this report.

1. Holding Times – Acceptable except as noted below:

pH by Method 9045C – Samples COMP-1, COMP-2, COMP-6, and COMP-7 were analyzed between 1 and 3 days past the one day holding time. The results for pH in samples COMP-1, COMP-2, COMP-6, and COMP-7 are qualified as estimated and flagged with a 'J' based on the holding time exceedance.

2. Blanks – Acceptable where applicable
3. Laboratory Control/Laboratory Control Duplicate Samples (LCS/LCSD) – Acceptable where applicable
4. Matrix Spike / Matrix Spike Duplicates (MS/MSD) – Acceptable where applicable except as noted below:

Ammonia by Method 350.3 – A MS was performed on sample B-3-S. A MS/MSD was performed on sample B-18-S. Results were acceptable.

A MS/MSD was performed on sample B-10-S. The percent recoveries for ammonia in the MS (89.9%) and MSD (88.4%) were below the control limits of 90-110%. The results for ammonia in samples B-20-S, B-7-S, B-7-M, B-7-D, B-6-S, B-6-M, B-9-S, B-9-M, B-10-S, B-10-M, B-11-S, B-11-M, B-12-S, B-12-M, B-12-D, B-13-S, B-13-D, B-14-S, B-14-D, and B-15-S are qualified as estimated and flagged with a 'J' or 'UJ' based on the MS/MSD results.

Chloride by Method 300.0 – A MS/MSD was performed on sample B-3-S. The percent recovery for chloride in the MS (126%) exceeded the control limits of 90-110%. As the percent recovery in the MSD and the RPD was acceptable, data were not qualified based on the MS result.

A MS/MSD was performed on sample B-10-S. The percent recoveries for chloride in the MS (81,900%) and MSD (21,500%) exceeded the control limits. The native sample concentration for chloride in sample B-10-S was more than four times (4x) the spike concentration; therefore, data were not qualified for chloride based on the MS/MSD results.

A MS/MSD was performed on sample B-18-S. The percent recovery for chloride in the MSD (164%) exceeded the control limits. As the percent recovery in the MS and the RPD was acceptable, data were not qualified based on the MS result.

Total Cyanide by Method 9010B-modified – A MS was performed on sample COMP-1. Results were acceptable.

Total Sulfide by Method 9030B – Matrix spikes were performed on samples COMP-1 and COMP-7. Results were acceptable.

5. Laboratory Duplicates – Acceptable where applicable except as noted below:

Ammonia by Method 350.3 – A laboratory duplicate was performed on sample B-3-S. Results were acceptable.

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Total Cyanide by Method 9010B-modified – A laboratory duplicate was performed on sample COMP-1. Results were acceptable.

Ignitability by Method 1030 – A laboratory duplicate was performed on a sample from an unrelated project. Results were acceptable.

pH by Method 9045C – Laboratory duplicates were performed on COMP-1, COMP-3, COMP-6, and COMP-7. Results were acceptable.

Total Sulfide by Method 9030B – A laboratory duplicate was performed on sample COMP-1. Results were acceptable.

A laboratory duplicate was performed on sample COMP-7. The RPD for sulfide (34.8%) exceeded the control limit of 30%. The native sample concentration for sulfide was less than two times (2x) the reporting limit; therefore, data were not qualified based on the laboratory duplicate.

6. Field Duplicates – Acceptable where applicable except as noted below:

General – Field duplicates were collected for B-1-S, B-7-M, and B-15-D and identified as B-19-S, B-20-S, and B-21-S, respectively. Results were comparable except as noted in the following paragraphs.

Chloride by Method 300.0 – The RPD for chloride in the parent sample / field duplicate pair B-1-S / B-19-S was not calculable. The results for chloride in samples B-1-S and B-19-S are qualified as estimated and flagged with a 'J' or 'UJ' based on the field duplicate results.

6. Reporting Limits – Acceptable except as noted below:

General – The reporting limits for one or more general chemistry parameters exceeded the reporting limits specified in the Study Plan due to the percent moisture content of the samples.

Overall Assessment of Data

The completeness for SDGs B5J0381, B5J0426, and B5J0465 is 100%. The usefulness of this data is based on USEPA guidance documents listed in the introduction to this report. Upon consideration of the information presented above, the data are acceptable except where flagged with data qualifiers that modify the usefulness of the individual values.

Table 1 – Summary of Qualified Data

<u>Sample ID</u>	<u>NCA ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>
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B-1-S	B5J0381-01	Total Nickel	48.2	mg/kg	J
		Total Copper	2,180	mg/kg	J
		Total Zinc	3,520	mg/kg	J
		Chloride	5.81 U	mg/kg	UJ
COMP-1	B5J0381-15	pH	9.31	Standard Units	J
COMP-2	B5J0381-16	pH	8.81	Standard Units	J
B-19-S	B5J0381-17	Total Nickel	60.6	mg/kg	J
		Total Copper	1,870	mg/kg	J
		Total Zinc	1,500	mg/kg	J
		Chloride	209	mg/kg	J
B-20-S	B5J0426-01	Total Copper	2,460	mg/kg	J
		Total Zinc	1,000	mg/kg	J
		Ammonia	336	mg/kg	J
B-7-S	B5J0426-02	Ammonia	261	mg/kg	J
B-7-M	B5J0426-03	Total Copper	1,320	mg/kg	J
		Total Zinc	696	mg/kg	J
		Ammonia	449	mg/kg	J
B-7-D	B5J0426-04	Ammonia	276	mg/kg	J
B-6-S	B5J0426-05	Ammonia	88.3	mg/kg	J
B-6-M	B5J0426-06	Ammonia	280	mg/kg	J
B-9-S	B5J0426-07	Ammonia	223	mg/kg	J
B-9-M	B5J0426-08	Ammonia	300	mg/kg	J
B-10-S	B5J0426-09	Ammonia	104	mg/kg	J
B-10-M	B5J0426-10	Ammonia	107	mg/kg	J
B-11-S	B5J0426-12	Ammonia	7.04 U	mg/kg	UJ
B-11-M	B5J0426-13	Ammonia	54.3	mg/kg	J
B-12-S	B5J0465-01	Ammonia	6.44 U	mg/kg	UJ
B-12-M	B5J0465-02	Ammonia	138	mg/kg	J
B-12-D	B5J0465-03	Ammonia	243	mg/kg	J
B-13-S	B5J0465-04	Ammonia	142	mg/kg	J
B-13-D	B5J0465-05	Ammonia	309	mg/kg	J
B-14-S	B5J0465-06	Ammonia	129	mg/kg	J
B-14-D	B5J0465-07	Ammonia	325	mg/kg	J
B-15-S	B5J0465-08	Ammonia	216	mg/kg	J
B-15-D	B5J0465-09	Total Zinc	1,200	mg/kg	J
B-21-S	B5J0465-17	Total Zinc	1,850	mg/kg	J
COMP-6	B5J0465-18	pH	9.25	Standard Units	J
COMP-7	B5J0465-19	pH	9.08	Standard Units	J



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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B - 20 - S	B5J0426-01	Soil	10/20/05 08:30	10/20/05 18:10
B - 7 - S	B5J0426-02	Soil	10/20/05 09:00	10/20/05 18:10
B - 7 - M	B5J0426-03	Soil	10/20/05 09:30	10/20/05 18:10
B - 7 - D	B5J0426-04	Soil	10/20/05 10:00	10/20/05 18:10
B - 6 - S	B5J0426-05	Soil	10/20/05 10:35	10/20/05 18:10
B - 6 - M	B5J0426-06	Soil	10/20/05 10:50	10/20/05 18:10
B - 9 - S	B5J0426-07	Soil	10/20/05 13:00	10/20/05 18:10
B - 9 - M	B5J0426-08	Soil	10/20/05 13:20	10/20/05 18:10
B - 10 - S	B5J0426-09	Soil	10/20/05 14:10	10/20/05 18:10
B - 10 - M	B5J0426-10	Soil	10/20/05 14:30	10/20/05 18:10
COMP - 3	B5J0426-11	Soil	10/20/05 15:25	10/20/05 18:10
B - 11 - S	B5J0426-12	Soil	10/20/05 15:00	10/20/05 18:10
B - 11 - M	B5J0426-13	Soil	10/20/05 15:20	10/20/05 18:10
COMP - 4	B5J0426-14	Soil	10/20/05 16:30	10/20/05 18:10
COMP - 5	B5J0426-15	Soil	10/20/05 16:15	10/20/05 18:10

North Creek Analytical - Bothell

Jeff Gerdes, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.
 Environmental Laboratory Network



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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maraico Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:07
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**Total Metals by EPA 6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B - 20 - S (B5J0426-01) Soil Sampled: 10/20/05 08:30 Received: 10/20/05 18:10									
Nickel	24.7	0.682	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B - 20 - S (B5J0426-01RE1) Soil Sampled: 10/20/05 08:30 Received: 10/20/05 18:10									
Copper	2460 J	13.6	mg/kg dry	20	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	142000	1760	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	108000	1760	"	"	"	"	"	"	
Zinc	1000 J	136	"	20	5J26067	10/26/05	11/06/05	EPA 6020	
B - 7 - S (B5J0426-02) Soil Sampled: 10/20/05 09:00 Received: 10/20/05 18:10									
Nickel	26.7	0.648	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B - 7 - S (B5J0426-02RE1) Soil Sampled: 10/20/05 09:00 Received: 10/20/05 18:10									
Copper	864	6.48	mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	120000	1850	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	74900	1850	"	"	"	"	"	"	
Zinc	609	64.8	"	10	5J26067	10/26/05	11/06/05	EPA 6020	
B - 7 - M (B5J0426-03) Soil Sampled: 10/20/05 09:30 Received: 10/20/05 18:10									
Nickel	27.1	0.605	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B - 7 - M (B5J0426-03RE1) Soil Sampled: 10/20/05 09:30 Received: 10/20/05 18:10									
Copper	1320 J	6.05	mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	140000	1710	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	101000	1710	"	"	"	"	"	"	
Zinc	696 J	60.5	"	10	5J26067	10/26/05	11/06/05	EPA 6020	

11-15-05

North Creek Analytical - Bothell

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Jeff Gerdes

Jeff Gerdes, Project Manager

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URS Corporation
 1501 4th Ave, Suite 1400
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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

**Total Metals by EPA 6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B - 7 - D (B5J0426-04) Soil Sampled: 10/20/05 10:00 Received: 10/20/05 18:10									
Nickel	16.8	0.647	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B - 7 - D (B5J0426-04RE1) Soil Sampled: 10/20/05 10:00 Received: 10/20/05 18:10									
Copper	535	3.24	mg/kg dry	5	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	123000	1670	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	116000	1670	"	"	"	"	"	"	
Zinc	524	32.4	"	5	5J26067	10/26/05	11/06/05	EPA 6020	
B - 6 - S (B5J0426-05) Soil Sampled: 10/20/05 10:35 Received: 10/20/05 18:10									
Nickel	37.8	0.644	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B - 6 - S (B5J0426-05RE1) Soil Sampled: 10/20/05 10:35 Received: 10/20/05 18:10									
Copper	797	3.22	mg/kg dry	5	5J26067	10/26/05	11/01/05	EPA 6020	
Potassium	112000	1820	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	119000	1820	"	"	"	"	"	"	
Zinc	865	32.2	"	5	5J26067	10/26/05	11/01/05	EPA 6020	
B - 6 - M (B5J0426-06) Soil Sampled: 10/20/05 10:50 Received: 10/20/05 18:10									
Nickel	32.5	0.517	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B - 6 - M (B5J0426-06RE1) Soil Sampled: 10/20/05 10:50 Received: 10/20/05 18:10									
Copper	1160	5.17	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	108000	1880	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	81300	1880	"	"	"	"	"	"	
Zinc	780	51.7	"	10	5J26068	10/26/05	11/08/05	EPA 6020	

North Creek Analytical - Bothell

Jeff Gerdes

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B - 9 - S (B5J0426-07) Soil Sampled: 10/20/05 13:00 Received: 10/20/05 18:10									
Nickel	37.8	0.619	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B - 9 - S (B5J0426-07RE1) Soil Sampled: 10/20/05 13:00 Received: 10/20/05 18:10									
Copper	1200	6.19	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	67500	1750	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	75000	1750	"	"	"	"	"	"	
Zinc	761	61.9	"	10	5J26068	10/26/05	11/08/05	EPA 6020	
B - 9 - M (B5J0426-08) Soil Sampled: 10/20/05 13:20 Received: 10/20/05 18:10									
Nickel	33.3	0.640	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B - 9 - M (B5J0426-08RE1) Soil Sampled: 10/20/05 13:20 Received: 10/20/05 18:10									
Copper	876	6.40	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	125000	1820	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	108000	1820	"	"	"	"	"	"	
Zinc	589	64.0	"	10	5J26068	10/26/05	11/08/05	EPA 6020	
B - 10 - S (B5J0426-09) Soil Sampled: 10/20/05 14:10 Received: 10/20/05 18:10									
Nickel	47.5	0.586	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B - 10 - S (B5J0426-09RE1) Soil Sampled: 10/20/05 14:10 Received: 10/20/05 18:10									
Copper	1270	5.86	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	117000	1850	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	86700	1850	"	"	"	"	"	"	
Zinc	931	58.6	"	10	5J26068	10/26/05	11/08/05	EPA 6020	

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URS Corporation
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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B - 10 - M (B5J0426-10) Soil Sampled: 10/20/05 14:30 Received: 10/20/05 18:10									
Nickel	22.4	0.536	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B - 10 - M (B5J0426-10RE1) Soil Sampled: 10/20/05 14:30 Received: 10/20/05 18:10									
Copper	428	2.68	mg/kg dry	5	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	110000	1690	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	97000	1690	"	"	"	"	"	"	
Zinc	356	26.8	"	5	5J26068	10/26/05	11/08/05	EPA 6020	
B - 11 - S (B5J0426-12) Soil Sampled: 10/20/05 15:00 Received: 10/20/05 18:10									
Nickel	98.1	0.806	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B - 11 - S (B5J0426-12RE1) Soil Sampled: 10/20/05 15:00 Received: 10/20/05 18:10									
Copper	3030	16.1	mg/kg dry	20	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	23700	2310	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	16400	2310	"	"	"	"	"	"	
Zinc	3040	161	"	20	5J26068	10/26/05	11/08/05	EPA 6020	
B - 11 - M (B5J0426-13) Soil Sampled: 10/20/05 15:20 Received: 10/20/05 18:10									
Nickel	36.1	0.593	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B - 11 - M (B5J0426-13RE1) Soil Sampled: 10/20/05 15:20 Received: 10/20/05 18:10									
Copper	1270	5.93	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	86900	1880	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	62900	1880	"	"	"	"	"	"	
Zinc	1200	59.3	"	10	5J26068	10/26/05	11/08/05	EPA 6020	

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 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 20 - S (B5J0426-01) Soil Sampled: 10/20/05 08:30 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 20 - S (B5J0426-01RE1) Soil Sampled: 10/20/05 08:30 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	0.109	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 7 - S (B5J0426-02) Soil Sampled: 10/20/05 09:00 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 7 - S (B5J0426-02RE1) Soil Sampled: 10/20/05 09:00 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 7 - M (B5J0426-03) Soil Sampled: 10/20/05 09:30 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	

North Creek Analytical - Bothell

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:07
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**TCLP Metals by EPA 1311/6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 7 - M (B5J0426-03RE1) Soil Sampled: 10/20/05 09:30 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	0.115	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 7 - D (B5J0426-04) Soil Sampled: 10/20/05 10:00 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 7 - D (B5J0426-04RE1) Soil Sampled: 10/20/05 10:00 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 6 - S (B5J0426-05) Soil Sampled: 10/20/05 10:35 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 6 - S (B5J0426-05RE1) Soil Sampled: 10/20/05 10:35 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 6 - M (B5J0426-06) Soil Sampled: 10/20/05 10:50 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 6 - M (B5J0426-06RE1) Soil Sampled: 10/20/05 10:50 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 9 - S (B5J0426-07) Soil Sampled: 10/20/05 13:00 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 9 - S (B5J0426-07RE1) Soil Sampled: 10/20/05 13:00 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 9 - M (B5J0426-08) Soil Sampled: 10/20/05 13:20 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 9 - M (B5J0426-08RE1) Soil Sampled: 10/20/05 13:20 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 10 - S (B5J0426-09) Soil Sampled: 10/20/05 14:10 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 10 - S (B5J0426-09RE1) Soil Sampled: 10/20/05 14:10 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	
B - 10 - M (B5J0426-10) Soil Sampled: 10/20/05 14:30 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 10 - M (B5J0426-10RE1) Soil Sampled: 10/20/05 14:30 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Lead	ND	0.100		"	"	"	"	"	"	
Selenium	ND	0.100		"	"	"	"	"	"	

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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

TCLP Metals by EPA 1311/6000/7000 Series Methods
 North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 11 - S (B5J0426-12) Soil Sampled: 10/20/05 15:00 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 11 - S (B5J0426-12RE1) Soil Sampled: 10/20/05 15:00 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	"
Barium	ND	1.00		"	"	"	"	"	"	"
Cadmium	ND	0.0500		"	"	"	"	"	"	"
Chromium	ND	0.100		"	"	"	"	"	"	"
Lead	ND	0.100		"	"	"	"	"	"	"
Selenium	ND	0.100		"	"	"	"	"	"	"
B - 11 - M (B5J0426-13) Soil Sampled: 10/20/05 15:20 Received: 10/20/05 18:10										
Mercury	ND	0.00250		mg/l	1	5K01063	11/01/05	11/02/05	EPA 7470A	
B - 11 - M (B5J0426-13RE1) Soil Sampled: 10/20/05 15:20 Received: 10/20/05 18:10										
Silver	ND	0.0500		mg/l	1	5K03041	11/03/05	11/04/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	11/01/05	"	"	"
Barium	ND	1.00		"	"	"	"	"	"	"
Cadmium	ND	0.0500		"	"	"	"	"	"	"
Chromium	ND	0.100		"	"	"	"	"	"	"
Lead	ND	0.100		"	"	"	"	"	"	"
Selenium	ND	0.100		"	"	"	"	"	"	"

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

**Conventional Chemistry Parameters by APHA/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B - 20 - S (B5J0426-01) Soil Sampled: 10/20/05 08:30 Received: 10/20/05 18:10									
Ammonia-Nitrogen	336 J	5.70	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 7 - S (B5J0426-02) Soil Sampled: 10/20/05 09:00 Received: 10/20/05 18:10									
Ammonia-Nitrogen	261 J	5.99	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 7 - M (B5J0426-03) Soil Sampled: 10/20/05 09:30 Received: 10/20/05 18:10									
Ammonia-Nitrogen	449 J	5.81	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 7 - D (B5J0426-04) Soil Sampled: 10/20/05 10:00 Received: 10/20/05 18:10									
Ammonia-Nitrogen	276 J	5.69	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 6 - S (B5J0426-05) Soil Sampled: 10/20/05 10:35 Received: 10/20/05 18:10									
Ammonia-Nitrogen	88.3 J	5.93	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 6 - M (B5J0426-06) Soil Sampled: 10/20/05 10:50 Received: 10/20/05 18:10									
Ammonia-Nitrogen	280 J	5.66	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 9 - S (B5J0426-07) Soil Sampled: 10/20/05 13:00 Received: 10/20/05 18:10									
Ammonia-Nitrogen	223 J	6.06	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 9 - M (B5J0426-08) Soil Sampled: 10/20/05 13:20 Received: 10/20/05 18:10									
Ammonia-Nitrogen	300 J	5.79	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 10 - S (B5J0426-09) Soil Sampled: 10/20/05 14:10 Received: 10/20/05 18:10									
Ammonia-Nitrogen	104 J	5.46	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Conventional Chemistry Parameters by APHA/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 10 - M (B5J0426-10) Soil Sampled: 10/20/05 14:30 Received: 10/20/05 18:10										
Ammonia-Nitrogen	107 J	5.41		mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
COMP - 3 (B5J0426-11) Soil Sampled: 10/20/05 15:25 Received: 10/20/05 18:10										
Cyanide (total)	ND	0.580		mg/kg dry	1	5J28056	10/28/05	10/28/05	EPA 9010B Mod	
pH	8.73			pH Units	"	5J21068	10/21/05	10/21/05	EPA 9045C	
Sulfide	ND	23.2		mg/kg dry	"	5J25060	10/25/05	10/25/05	EPA 9030B	
B - 11 - S (B5J0426-12) Soil Sampled: 10/20/05 15:00 Received: 10/20/05 18:10										
Ammonia-Nitrogen	ND US	7.04		mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B - 11 - M (B5J0426-13) Soil Sampled: 10/20/05 15:20 Received: 10/20/05 18:10										
Ammonia-Nitrogen	54.3 J	6.27		mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
COMP - 4 (B5J0426-14) Soil Sampled: 10/20/05 16:30 Received: 10/20/05 18:10										
Cyanide (total)	ND	0.574		mg/kg dry	1	5J28056	10/28/05	10/28/05	EPA 9010B Mod	
pH	9.00			pH Units	"	5J21068	10/21/05	10/21/05	EPA 9045C	
Sulfide	28.1	22.7		mg/kg dry	"	5J25060	10/25/05	10/25/05	EPA 9030B	
COMP - 5 (B5J0426-15) Soil Sampled: 10/20/05 16:15 Received: 10/20/05 18:10										
Cyanide (total)	ND	0.624		mg/kg dry	1	5J28056	10/28/05	10/28/05	EPA 9010B Mod	
pH	8.68			pH Units	"	5J21068	10/21/05	10/21/05	EPA 9045C	
Sulfide	ND	24.8		mg/kg dry	"	5J25060	10/25/05	10/25/05	EPA 9030B	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Anions by EPA Method 300.0
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B - 20 - S (B5J0426-01) Soil Sampled: 10/20/05 08:30 Received: 10/20/05 18:10									
Chloride	261000	46400	mg/kg dry	10000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 7 - S (B5J0426-02) Soil Sampled: 10/20/05 09:00 Received: 10/20/05 18:10									
Chloride	169000	23800	mg/kg dry	5000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 7 - M (B5J0426-03) Soil Sampled: 10/20/05 09:30 Received: 10/20/05 18:10									
Chloride	276000	46100	mg/kg dry	10000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 7 - D (B5J0426-04) Soil Sampled: 10/20/05 10:00 Received: 10/20/05 18:10									
Chloride	258000	44700	mg/kg dry	10000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 6 - S (B5J0426-05) Soil Sampled: 10/20/05 10:35 Received: 10/20/05 18:10									
Chloride	283000	48200	mg/kg dry	10000	5J27056	10/27/05	11/03/05	EPA 300.0	
B - 6 - M (B5J0426-06) Soil Sampled: 10/20/05 10:50 Received: 10/20/05 18:10									
Chloride	213000	24500	mg/kg dry	5000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 9 - S (B5J0426-07) Soil Sampled: 10/20/05 13:00 Received: 10/20/05 18:10									
Chloride	152000	24200	mg/kg dry	5000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 9 - M (B5J0426-08) Soil Sampled: 10/20/05 13:20 Received: 10/20/05 18:10									
Chloride	209000	22200	mg/kg dry	5000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 10 - S (B5J0426-09) Soil Sampled: 10/20/05 14:10 Received: 10/20/05 18:10									
Chloride	243000	23200	mg/kg dry	5000	5J27056	10/27/05	11/02/05	EPA 300.0	

North Creek Analytical - Bothell

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 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Anions by EPA Method 300.0
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 10 - M (B5J0426-10) Soil Sampled: 10/20/05 14:30 Received: 10/20/05 18:10										
Chloride	221000	22300		mg/kg dry	5000	5J27056	10/27/05	11/02/05	EPA 300.0	
B - 11 - S (B5J0426-12) Soil Sampled: 10/20/05 15:00 Received: 10/20/05 18:10										
Chloride	149	27.0		mg/kg dry	5	5J27056	10/27/05	11/03/05	EPA 300.0	
B - 11 - M (B5J0426-13) Soil Sampled: 10/20/05 15:20 Received: 10/20/05 18:10										
Chloride	124000	25800		mg/kg dry	5000	5J27056	10/27/05	11/02/05	EPA 300.0	

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:07
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**Physical Parameters by APHA/ASTM/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B - 20 - S (B5J0426-01) Soil Sampled: 10/20/05 08:30 Received: 10/20/05 18:10									
Dry Weight	85.2	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 7 - S (B5J0426-02) Soil Sampled: 10/20/05 09:00 Received: 10/20/05 18:10									
Dry Weight	81.2	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 7 - M (B5J0426-03) Soil Sampled: 10/20/05 09:30 Received: 10/20/05 18:10									
Dry Weight	86.1	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 7 - D (B5J0426-04) Soil Sampled: 10/20/05 10:00 Received: 10/20/05 18:10									
Dry Weight	87.8	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 6 - S (B5J0426-05) Soil Sampled: 10/20/05 10:35 Received: 10/20/05 18:10									
Dry Weight	82.6	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 6 - M (B5J0426-06) Soil Sampled: 10/20/05 10:50 Received: 10/20/05 18:10									
Dry Weight	81.3	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 9 - S (B5J0426-07) Soil Sampled: 10/20/05 13:00 Received: 10/20/05 18:10									
Dry Weight	81.6	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 9 - M (B5J0426-08) Soil Sampled: 10/20/05 13:20 Received: 10/20/05 18:10									
Dry Weight	85.9	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	
B - 10 - S (B5J0426-09) Soil Sampled: 10/20/05 14:10 Received: 10/20/05 18:10									
Dry Weight	85.3	1.00	%	1	5J31082	10/31/05	11/02/05	BSOPSPL003R08	

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Project: Maralco
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Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B - 10 - M (B5J0426-10) Soil Sampled: 10/20/05 14:30 Received: 10/20/05 18:10										
Dry Weight	88.0	1.00		%	1	5J31082	10/31/05	11/02/05	BSOPSPLO03R08	
COMP - 3 (B5J0426-11) Soil Sampled: 10/20/05 15:25 Received: 10/20/05 18:10										
Dry Weight	85.3	1.00		%	1	5J31082	10/31/05	11/02/05	BSOPSPLO03R08	
B - 11 - S (B5J0426-12) Soil Sampled: 10/20/05 15:00 Received: 10/20/05 18:10										
Dry Weight	70.5	1.00		%	1	5J31082	10/31/05	11/02/05	BSOPSPLO03R08	
B - 11 - M (B5J0426-13) Soil Sampled: 10/20/05 15:20 Received: 10/20/05 18:10										
Dry Weight	77.3	1.00		%	1	5J31082	10/31/05	11/02/05	BSOPSPLO03R08	
COMP - 4 (B5J0426-14) Soil Sampled: 10/20/05 16:30 Received: 10/20/05 18:10										
Dry Weight	85.4	1.00		%	1	5J31082	10/31/05	11/02/05	BSOPSPLO03R08	
COMP - 5 (B5J0426-15) Soil Sampled: 10/20/05 16:15 Received: 10/20/05 18:10										
Dry Weight	80.1	1.00		%	1	5J31082	10/31/05	11/02/05	BSOPSPLO03R08	

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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Spokane

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
COMP - 3 (B5J0426-11) Soil Sampled: 10/20/05 15:25 Received: 10/20/05 18:10									
Flashpoint	ND	20.0	°C	1	5100254	10/31/05	11/01/05	EPA 1010	F-01
COMP - 4 (B5J0426-14) Soil Sampled: 10/20/05 16:30 Received: 10/20/05 18:10									
Flashpoint	ND	20.0	°C	1	5100254	10/31/05	11/01/05	EPA 1010	F-01
COMP - 5 (B5J0426-15) Soil Sampled: 10/20/05 16:15 Received: 10/20/05 18:10									
Flashpoint	ND	20.0	°C	1	5100254	10/31/05	11/01/05	EPA 1010	F-01

North Creek Analytical - Bothell

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:07
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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26067: Prepared 10/26/05 Using EPA 3050B

Blank (5J26067-BLK1)

Copper	ND	0.500	mg/kg							
Nickel	ND	0.500	"							
Zinc	ND	5.00	"							

LCS (5J26067-BS1)

Copper	37.6	0.500	mg/kg	40.0		94.0	80-120			
Nickel	38.4	0.500	"	40.0		96.0	80-120			
Zinc	40.9	5.00	"	40.0		102	80-120			

LCS Dup (5J26067-BSD1)

Copper	37.8	0.500	mg/kg	40.0		94.5	80-120	0.531	20	
Nickel	38.4	0.500	"	40.0		96.0	80-120	0.00	20	
Zinc	41.7	5.00	"	40.0		104	80-120	1.94	20	

Matrix Spike (5J26067-MS1)

Source: BSJ0381-05

Nickel	89.5	0.778	mg/kg dry	62.2	34.8	87.9	56-135			
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Matrix Spike (5J26067-MS2)

Source: BSJ0381-05RE1

Copper	1100	7.78	mg/kg dry	62.2	1090	16.1	33-156			Q-03
Zinc	659	77.8	"	62.2	529	209	20-160			Q-03

Matrix Spike Dup (5J26067-MSD1)

Source: BSJ0381-05

Nickel	91.2	0.778	mg/kg dry	62.2	34.8	90.7	56-135	1.88	30	
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Matrix Spike Dup (5J26067-MSD2)

Source: BSJ0381-05RE1

Copper	1070	7.78	mg/kg dry	62.2	1090	-32.2	33-156	2.76	30	Q-03
Zinc	582	77.8	"	62.2	529	85.2	20-160	12.4	30	

North Creek Analytical - Bothell

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch SJ26067: Prepared 10/26/05 Using EPA 3050B

Post Spike (SJ26067-PS1)

Source: B5J0381-05

Nickel	0.132		ug/ml	0.100	0.0448	87.2	75-125			
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Post Spike (SJ26067-PS2)

Source: B5J0381-05RE1

Copper	1.55		ug/ml	0.101	1.41	139	75-125			Q-03
Zinc	0.750		"	0.100	0.681	69.0	75-125			Q-03

Batch SJ26068: Prepared 10/26/05 Using EPA 3050B

Blank (SJ26068-BLK1)

Copper	ND	0.500	mg/kg							
Nickel	ND	0.500	"							
Zinc	ND	5.00	"							

LCS (SJ26068-BS1)

Copper	38.6	0.500	mg/kg	40.0		96.5	80-120			
Nickel	39.6	0.500	"	40.0		99.0	80-120			
Zinc	39.9	5.00	"	40.0		99.8	80-120			

LCS Dup (SJ26068-BSD1)

Copper	38.8	0.500	mg/kg	40.0		97.0	80-120	0.517	20	
Nickel	40.0	0.500	"	40.0		100	80-120	1.01	20	
Zinc	40.2	5.00	"	40.0		100	80-120	0.749	20	

Matrix Spike (SJ26068-MS1)

Source: B5J0426-09

Nickel	81.8	0.586	mg/kg dry	46.9	47.5	73.1	56-135			
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Matrix Spike (SJ26068-MS2)

Source: B5J0426-09RE1

Copper	1170	5.86	mg/kg dry	46.9	1270	-213	33-156			Q-03
Zinc	902	58.6	"	46.9	931	-61.8	20-160			Q-01

North Creek Analytical - Bothell

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26068: Prepared 10/26/05 Using EPA 3050B

Matrix Spike Dup (5J26068-MSD1)

Source: B5J0426-09

Nickel	98.5	0.586	mg/kg dry	46.9	47.5	109	56-135	18.5	30	
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Matrix Spike Dup (5J26068-MSD2)

Source: B5J0426-09RE1

Copper	1260	5.86	mg/kg dry	46.9	1270	-21.3	33-156	7.41	30	Q-03
Zinc	961	58.6	"	46.9	931	64.0	20-160	6.33	30	

Post Spike (5J26068-PS1)

Source: B5J0426-09

Nickel	0.174		ug/ml	0.100	0.0811	92.9	75-125			
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Post Spike (5J26068-PS2)

Source: B5J0426-09RE1

Copper	2.25		ug/ml	0.101	2.16	89.1	75-125			
Zinc	1.68		"	0.100	1.59	90.0	75-125			

Batch 5K08027: Prepared 11/08/05 Using EPA 3050B

Blank (5K08027-BLK1)

Potassium	ND	15.0	mg/kg							
Sodium	ND	15.0	"							

LCS (5K08027-BS1)

Potassium	560	15.0	mg/kg	500		112	80-120			
Sodium	273	15.0	"	250		109	80-120			

LCS Dup (5K08027-BSD1)

Potassium	544	15.0	mg/kg	500		109	80-120	2.90	20	
Sodium	268	15.0	"	250		107	80-120	1.85	20	

North Creek Analytical - Bothell

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5K08027: Prepared 11/08/05 Using EPA 3050B

Matrix Spike (5K08027-MS1)

Source: B5J0426-01RE1

Potassium	122000	1730	mg/kg dry	575	142000	-3480	70-130			Q-03
Sodium	105000	1730	"	288	108000	-1040	70-130			Q-03

Matrix Spike Dup (5K08027-MSD1)

Source: B5J0426-01RE1

Potassium	153000	1760	mg/kg dry	587	142000	1870	70-130	22.5	30	Q-03
Sodium	116000	1760	"	293	108000	2730	70-130	9.95	30	Q-03

Post Spike (5K08027-PS1)

Source: B5J0426-01RE1

Potassium	2350		ug/ml	10.0	2420	-700	75-125			Q-03
Sodium	1860		"	5.00	1840	400	75-125			Q-03

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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5K01063: Prepared 11/01/05 Using EPA 7470A

Blank (5K01063-BLK1)

Mercury ND 0.00100 mg/l

LCS (5K01063-BS1)

Mercury 0.00472 0.00100 mg/l 0.00500 94.4 80-120

LCS Dup (5K01063-BSD1)

Mercury 0.00467 0.00100 mg/l 0.00500 93.4 80-120 1.06 20

Matrix Spike (5K01063-MS1)

Source: BSJ0426-01

Mercury 0.0118 0.00250 mg/l 0.0125 ND 94.4 75-125

Matrix Spike Dup (5K01063-MSD1)

Source: BSJ0426-01

Mercury 0.0130 0.00250 mg/l 0.0125 ND 104 75-125 9.68 20

Batch 5K03041: Prepared 11/03/05 Using EPA 3010A

Blank (5K03041-BLK1)

Silver ND 0.0500 mg/l
 Arsenic ND 0.100 "
 Barium ND 1.00 "
 Cadmium ND 0.0500 "
 Chromium ND 0.100 "
 Lead ND 0.100 "
 Selenium ND 0.100 "

LCS (5K03041-BS1)

Silver 10.5 0.0500 mg/l 10.0 105 80-120
 Arsenic 51.4 0.100 " 50.0 103 80-120
 Barium 48.7 1.00 " 50.0 97.4 80-120
 Cadmium 51.1 0.0500 " 50.0 102 80-120
 Chromium 50.1 0.100 " 50.0 100 80-120
 Lead 51.7 0.100 " 50.0 103 80-120
 Selenium 51.7 0.100 " 50.0 103 80-120

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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5K03041: Prepared 11/03/05 Using EPA 3010A

LCS Dup (5K03041-BSD1)

Silver	11.0	0.0500	mg/l	10.0		110	80-120	4.65	35	
Arsenic	51.1	0.100	"	50.0		102	80-120	0.585	20	
Barium	47.9	1.00	"	50.0		95.8	80-120	1.66	20	
Cadmium	51.0	0.0500	"	50.0		102	80-120	0.196	20	
Chromium	49.8	0.100	"	50.0		99.6	80-120	0.601	20	
Lead	51.5	0.100	"	50.0		103	80-120	0.388	20	
Selenium	51.7	0.100	"	50.0		103	80-120	0.00	20	

Matrix Spike (5K03041-MS1)

Source: B5J0426-01RE1

Silver	11.1	0.0500	mg/l	10.0	ND	111	75-125			
Arsenic	50.7	0.100	"	50.0	ND	101	80-120			
Barium	47.3	1.00	"	50.0	0.561	93.5	80-120			
Cadmium	50.2	0.0500	"	50.0	0.0110	100	80-120			
Chromium	48.7	0.100	"	50.0	0.109	97.2	80-120			
Lead	51.0	0.100	"	50.0	0.0270	102	80-120			
Selenium	51.0	0.100	"	50.0	0.0630	102	80-120			

Matrix Spike Dup (5K03041-MSD1)

Source: B5J0426-01RE1

Silver	12.1	0.0500	mg/l	10.0	ND	121	75-125	8.62	35	
Arsenic	50.5	0.100	"	50.0	ND	101	80-120	0.395	20	
Barium	46.2	1.00	"	50.0	0.561	91.3	80-120	2.35	20	
Cadmium	50.0	0.0500	"	50.0	0.0110	100	80-120	0.399	20	
Chromium	48.6	0.100	"	50.0	0.109	97.0	80-120	0.206	20	
Lead	50.9	0.100	"	50.0	0.0270	102	80-120	0.196	20	
Selenium	50.7	0.100	"	50.0	0.0630	101	80-120	0.590	20	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5J21068: Prepared 10/21/05 Using General Preparation										
Duplicate (5J21068-DUP1)					Source: B5J0426-11					
pH	8.74		pH Units		8.73			0.114	10	
Batch 5J25060: Prepared 10/25/05 Using General Preparation										
Blank (5J25060-BLK1)										
Sulfide	ND	19.7	mg/kg							
LCS (5J25060-BS1)										
Sulfide	104	19.9	mg/kg	125		83.2	75-125			
LCS Dup (5J25060-BSD1)										
Sulfide	109	20.0	mg/kg	125		87.2	75-125	4.69	25	
Duplicate (5J25060-DUP1)					Source: B5J0465-19					
Sulfide	39.8	24.6	mg/kg dry		28.0			34.8	30	Q-14
Matrix Spike (5J25060-MS1)					Source: B5J0465-19					
Sulfide	175	24.3	mg/kg dry	153	28.0	96.1	20-120			
Batch 5J28056: Prepared 10/28/05 Using General Preparation										
Blank (5J28056-BLK1)										
Cyanide (total)	ND	0.500	mg/kg							
Blank (5J28056-BLK2)										
Cyanide (total)	ND	0.500	mg/kg							

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

**Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5J28056: Prepared 10/28/05 Using General Preparation										
LCS (5J28056-BS1)										
Cyanide (total)	5.10	0.500	mg/kg	4.97		103	85-115			
LCS (5J28056-BS2)										
Cyanide (total)	4.95	0.500	mg/kg	4.97		99.6	85-115			
LCS Dup (5J28056-BSD1)										
Cyanide (total)	5.00	0.500	mg/kg	4.97		101	85-115	1.98	30	
Duplicate (5J28056-DUP1) Source: B5J0381-15										
Cyanide (total)	1.16	0.683	mg/kg dry		1.16			0.00	46	
Matrix Spike (5J28056-MS1) Source: B5J0381-15										
Cyanide (total)	7.30	0.664	mg/kg dry	6.60	1.16	93.0	27-138			
Batch 5J31069: Prepared 10/31/05 Using General Preparation										
Blank (5J31069-BLK1)										
Ammonia-Nitrogen	ND	5.00	mg/kg as N							
LCS (5J31069-BS1)										
Ammonia-Nitrogen	236	5.00	mg/kg as N	250		94.4	75-125			
LCS Dup (5J31069-BSD1)										
Ammonia-Nitrogen	239	5.00	mg/kg as N	250		95.6	75-125	1.26	25	
Matrix Spike (5J31069-MS1) Source: B5J0426-09										
Ammonia-Nitrogen	354	5.57	mg/kg as N dry	278	104	89.9	59-127			

North Creek Analytical - Bothell

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:07
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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5J31069: Prepared 10/31/05 Using General Preparation

Matrix Spike Dup (5J31069-MSD1)

Source: B5J0426-09

Ammonia-Nitrogen	317	4.82	mg/kg as N dry	241	104	88.4	59-127	11.0	30	
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Anions by EPA Method 300.0 - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5J27056: Prepared 10/27/05 Using General Preparation										
Blank (5J27056-BLK1)										
Chloride	ND	4.00	mg/kg							
LCS (5J27056-BS1)										
Chloride	18.5	4.00	mg/kg	20.0		92.5	90-110			
LCS Dup (5J27056-BSD1)										
Chloride	18.8	4.00	mg/kg	20.0		94.0	90-110	1.61	10	
Matrix Spike (5J27056-MS1) Source: B5J0426-09										
Chloride	224000	23200	mg/kg dry	23.2	243000	-81900	62-157			Q-15
Matrix Spike Dup (5J27056-MSD1) Source: B5J0426-09										
Chloride	248000	23300	mg/kg dry	23.3	243000	21500	62-157	10.2	25	Q-15

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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting	Units	Spike Level	Source	%REC		RPD	Notes
		Limit			Result	%REC	Limits	RPD	

Batch 5J31082: Prepared 10/31/05 Using Dry Weight

Blank (5J31082-BLK1)

Dry Weight	100	1.00	%						
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 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:07

Notes and Definitions

- F-01 No flash detected up to 100 °C
- Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- Q-03 The percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
- Q-14 Visual examination indicates the RPD and/or matrix spike recovery is outside the control limit due to a non-homogeneous sample matrix.
- Q-15 Analyses are not controlled on matrix spike RPD and/or percent recoveries when the sample concentration is significantly higher than the spike level.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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SUBCONTRACT ORDER
North Creek Analytical - Bothell
B5J0426

SENDING LABORATORY:

North Creek Analytical - Bothell
 11720 North Creek Parkway North, Suite 400
 Bothell, WA 98011-8223
 Phone: (425) 420-9200
 Fax: (425) 420-9210
 Project Manager: Jeff Gerdes

RECEIVING LABORATORY:

North Creek Analytical - Spokane
 11922 E 1st Ave
 Spokane, WA/USA 99206
 Phone :509-924-9200
 Fax: 509-924-9290

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: B5J0426-11 Ignitability-1010 Containers Supplied: 4 oz. jar (B)	Soil 11/03/05 17:00	Sampled: 10/20/05 15:25 11/17/05 15:25	[REDACTED]	Sub contract to Spokane.
Sample ID: B5J0426-14 Ignitability-1010 Containers Supplied: 4 oz. jar (B)	Soil 11/03/05 17:00	Sampled: 10/20/05 16:30 11/17/05 16:30	[REDACTED]	Sub contract to Spokane.
Sample ID: B5J0426-15 Ignitability-1010 Containers Supplied: 4 oz. jar (B)	Soil 11/03/05 17:00	Sampled: 10/20/05 16:15 11/17/05 16:15	[REDACTED]	Sub contract to Spokane.

Released By Chlette Weaver Date 10-24-05 Received By [Signature] Date 10/25/05
 Released By _____ Date _____ Received By 2.5°C Date _____



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URS Corporation
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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1-S	B5J0381-01	Soil	10/19/05 10:30	10/19/05 18:45
B-1-D	B5J0381-02	Soil	10/19/05 10:35	10/19/05 18:45
B-2-S	B5J0381-03	Soil	10/19/05 11:25	10/19/05 18:45
B-2-D	B5J0381-04	Soil	10/19/05 11:27	10/19/05 18:45
B-3-S	B5J0381-05	Soil	10/19/05 12:15	10/19/05 18:45
B-3-D	B5J0381-06	Soil	10/19/05 12:20	10/19/05 18:45
B-4-S	B5J0381-07	Soil	10/19/05 13:05	10/19/05 18:45
B-4-M	B5J0381-08	Soil	10/19/05 13:10	10/19/05 18:45
B-4-D	B5J0381-09	Soil	10/19/05 13:15	10/19/05 18:45
B-5-S	B5J0381-10	Soil	10/19/05 13:55	10/19/05 18:45
B-5-D	B5J0381-11	Soil	10/19/05 14:00	10/19/05 18:45
B-8-S	B5J0381-12	Soil	10/19/05 14:25	10/19/05 18:45
B-8-M	B5J0381-13	Soil	10/19/05 14:30	10/19/05 18:45
B-8-D	B5J0381-14	Soil	10/19/05 14:37	10/19/05 18:45
COMP-1	B5J0381-15	Soil	10/19/05 15:35	10/19/05 18:45
COMP-2	B5J0381-16	Soil	10/19/05 15:55	10/19/05 18:45
B-19-S	B5J0381-17	Soil	10/19/05 10:45	10/19/05 18:45

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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-1-S (B5J0381-01) Soil Sampled: 10/19/05 10:30 Received: 10/19/05 18:45										
Nickel	48.2 J	0.756		mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-1-S (B5J0381-01RE1) Soil Sampled: 10/19/05 10:30 Received: 10/19/05 18:45										
Copper	2180 J	15.1		mg/kg dry	20	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	38000	1990		"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	23600	1990		"	"	"	"	"	"	
Zinc	3520 J	151		"	20	5J26067	10/26/05	11/06/05	EPA 6020	
B-1-D (B5J0381-02) Soil Sampled: 10/19/05 10:35 Received: 10/19/05 18:45										
Nickel	35.2	0.636		mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-1-D (B5J0381-02RE1) Soil Sampled: 10/19/05 10:35 Received: 10/19/05 18:45										
Copper	1000	6.36		mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	23600	2380		"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	20900	2380		"	"	"	"	"	"	
Zinc	767	63.6		"	10	5J26067	10/26/05	11/06/05	EPA 6020	
B-2-S (B5J0381-03) Soil Sampled: 10/19/05 11:25 Received: 10/19/05 18:45										
Nickel	142	0.831		mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-2-S (B5J0381-03RE1) Soil Sampled: 10/19/05 11:25 Received: 10/19/05 18:45										
Copper	4760	16.6		mg/kg dry	20	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	42600	2100		"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	27200	2100		"	"	"	"	"	"	
Zinc	4250	166		"	20	5J26067	10/26/05	11/06/05	EPA 6020	

11-15-05

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

**Total Metals by EPA 6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-2-D (B5J0381-04) Soil Sampled: 10/19/05 11:27 Received: 10/19/05 18:45									
Nickel	67.2	0.756	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-2-D (B5J0381-04RE1) Soil Sampled: 10/19/05 11:27 Received: 10/19/05 18:45									
Copper	2740	15.1	mg/kg dry	20	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	38200	2270	"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	26200	2270	"	"	"	"	"	"	
Zinc	1780	151	"	20	5J26067	10/26/05	11/06/05	EPA 6020	
B-3-S (B5J0381-05) Soil Sampled: 10/19/05 12:15 Received: 10/19/05 18:45									
Nickel	34.8	0.778	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-3-S (B5J0381-05RE1) Soil Sampled: 10/19/05 12:15 Received: 10/19/05 18:45									
Copper	1090	7.78	mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	4110	23.3	"	1	5K08025	11/08/05	11/11/05	EPA 6010B	
Sodium	4590	23.3	"	"	"	"	"	"	
Zinc	529	77.8	"	10	5J26067	10/26/05	11/06/05	EPA 6020	
B-3-D (B5J0381-06) Soil Sampled: 10/19/05 12:20 Received: 10/19/05 18:45									
Nickel	100	0.576	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-3-D (B5J0381-06RE1) Soil Sampled: 10/19/05 12:20 Received: 10/19/05 18:45									
Copper	2480	11.5	mg/kg dry	20	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	6260	19.0	"	1	5K08025	11/08/05	11/11/05	EPA 6010B	
Sodium	4500	19.0	"	"	"	"	"	"	
Zinc	1670	115	"	20	5J26067	10/26/05	11/06/05	EPA 6020	

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**Total Metals by EPA 6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B-4-S (B5J0381-07) Soil Sampled: 10/19/05 13:05 Received: 10/19/05 18:45									
Nickel	72.8	0.842	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-4-S (B5J0381-07RE1) Soil Sampled: 10/19/05 13:05 Received: 10/19/05 18:45									
Copper	2320	8.42	mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	7210	21.0	"	1	5K08025	11/08/05	11/11/05	EPA 6010B	
Sodium	7200	21.0	"	"	"	"	"	"	
Zinc	1360	84.2	"	10	5J26067	10/26/05	11/06/05	EPA 6020	
B-4-M (B5J0381-08) Soil Sampled: 10/19/05 13:10 Received: 10/19/05 18:45									
Nickel	110	0.776	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-4-M (B5J0381-08RE1) Soil Sampled: 10/19/05 13:10 Received: 10/19/05 18:45									
Copper	5730	38.8	mg/kg dry	50	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	6850	22.6	"	1	5K08025	11/08/05	11/11/05	EPA 6010B	
Sodium	7240	22.6	"	"	"	"	"	"	
Zinc	2210	388	"	50	5J26067	10/26/05	11/06/05	EPA 6020	
B-4-D (B5J0381-09) Soil Sampled: 10/19/05 13:15 Received: 10/19/05 18:45									
Nickel	45.5	0.935	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-4-D (B5J0381-09RE1) Soil Sampled: 10/19/05 13:15 Received: 10/19/05 18:45									
Copper	1770	9.35	mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	12000	23.0	"	1	5K08025	11/08/05	11/11/05	EPA 6010B	
Sodium	8550	23.0	"	"	"	"	"	"	
Zinc	846	93.5	"	10	5J26067	10/26/05	11/06/05	EPA 6020	

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URS Corporation
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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5-S (B5J0381-10) Soil Sampled: 10/19/05 13:55 Received: 10/19/05 18:45									
Nickel	39.0	0.645	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-5-S (B5J0381-10RE1) Soil Sampled: 10/19/05 13:55 Received: 10/19/05 18:45									
Copper	1520	6.45	mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	32200	2200	"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	18800	2200	"	"	"	"	"	"	
Zinc	700	64.5	"	10	5J26067	10/26/05	11/06/05	EPA 6020	
B-5-D (B5J0381-11) Soil Sampled: 10/19/05 14:00 Received: 10/19/05 18:45									
Nickel	74.6	0.729	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-5-D (B5J0381-11RE1) Soil Sampled: 10/19/05 14:00 Received: 10/19/05 18:45									
Copper	2470	14.6	mg/kg dry	20	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	47800	2080	"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	41500	2080	"	"	"	"	"	"	
Zinc	1180	146	"	20	5J26067	10/26/05	11/06/05	EPA 6020	
B-8-S (B5J0381-12) Soil Sampled: 10/19/05 14:25 Received: 10/19/05 18:45									
Nickel	51.5	0.708	mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-8-S (B5J0381-12RE1) Soil Sampled: 10/19/05 14:25 Received: 10/19/05 18:45									
Copper	1470	7.08	mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	20900	2040	"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	12100	2040	"	"	"	"	"	"	
Zinc	882	70.8	"	10	5J26067	10/26/05	11/06/05	EPA 6020	

North Creek Analytical - Bothell

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 16:48
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**Total Metals by EPA 6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-8-M (B5J0381-13) Soil Sampled: 10/19/05 14:30 Received: 10/19/05 18:45										
Nickel	35.3	0.746		mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-8-M (B5J0381-13RE1) Soil Sampled: 10/19/05 14:30 Received: 10/19/05 18:45										
Copper	1220	7.46		mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	101000	1950		"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	67500	1950		"	"	"	"	"	"	
Zinc	1830	74.6		"	10	5J26067	10/26/05	11/06/05	EPA 6020	
B-8-D (B5J0381-14) Soil Sampled: 10/19/05 14:37 Received: 10/19/05 18:45										
Nickel	44.4	0.517		mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-8-D (B5J0381-14RE1) Soil Sampled: 10/19/05 14:37 Received: 10/19/05 18:45										
Copper	1470	10.3		mg/kg dry	20	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	159000	1740		"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	44000	1740		"	"	"	"	"	"	
Zinc	885	103		"	20	5J26067	10/26/05	11/06/05	EPA 6020	
B-19-S (B5J0381-17) Soil Sampled: 10/19/05 10:45 Received: 10/19/05 18:45										
Nickel	60.6 J	0.868		mg/kg dry	1	5J26067	10/26/05	11/01/05	EPA 6020	
B-19-S (B5J0381-17RE1) Soil Sampled: 10/19/05 10:45 Received: 10/19/05 18:45										
Copper	1870 J	8.68		mg/kg dry	10	5J26067	10/26/05	11/06/05	EPA 6020	
Potassium	45300	2440		"	100	5K08025	11/08/05	11/12/05	EPA 6010B	
Sodium	24700	2440		"	"	"	"	"	"	
Zinc	1500 J	86.8		"	10	5J26067	10/26/05	11/06/05	EPA 6020	

11-15-05

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URS Corporation Project: Maralco
 1501 4th Ave, Suite 1400 Project Number: 33757742
 Seattle, WA/USA 98101-1616 Project Manager: Vance Atkins Reported: 11/14/05 16:48

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-1-S (B5J0381-01) Soil Sampled: 10/19/05 10:30 Received: 10/19/05 18:45										
Silver	ND	0.0500		mg/l	1	5J26011	10/26/05	10/26/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5J26053	10/26/05	10/26/05	EPA 7470A	
Lead	ND	0.100		"	"	5J26011	10/26/05	10/26/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	
B-1-D (B5J0381-02) Soil Sampled: 10/19/05 10:35 Received: 10/19/05 18:45										
Silver	ND	0.0500		mg/l	1	5J26011	10/26/05	10/26/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5J26053	10/26/05	10/26/05	EPA 7470A	
Lead	ND	0.100		"	"	5J26011	10/26/05	10/26/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	
B-2-S (B5J0381-03) Soil Sampled: 10/19/05 11:25 Received: 10/19/05 18:45										
Silver	ND	0.0500		mg/l	1	5J26011	10/26/05	10/26/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5J26053	10/26/05	10/26/05	EPA 7470A	
Lead	ND	0.100		"	"	5J26011	10/26/05	10/26/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	

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URS Corporation
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 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

B-2-D (B5J0381-04) Soil Sampled: 10/19/05 11:27 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26011	10/26/05	10/26/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26053	10/26/05	10/26/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26011	10/26/05	10/26/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-3-S (B5J0381-05) Soil Sampled: 10/19/05 12:15 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26011	10/26/05	10/26/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26053	10/26/05	10/26/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26011	10/26/05	10/26/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-3-D (B5J0381-06) Soil Sampled: 10/19/05 12:20 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26011	10/26/05	10/26/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26053	10/26/05	10/26/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26011	10/26/05	10/26/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

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TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

B-4-S (B5J0381-07) Soil Sampled: 10/19/05 13:05 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-4-M (B5J0381-08) Soil Sampled: 10/19/05 13:10 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-4-D (B5J0381-09) Soil Sampled: 10/19/05 13:15 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

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**TCLP Metals by EPA 1311/6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

B-5-S (B5J0381-10) Soil Sampled: 10/19/05 13:55 Received: 10/19/05 18:45

Silver	ND	0.0500		mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100		"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	

B-5-D (B5J0381-11) Soil Sampled: 10/19/05 14:00 Received: 10/19/05 18:45

Silver	ND	0.0500		mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100		"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	

B-8-S (B5J0381-12) Soil Sampled: 10/19/05 14:25 Received: 10/19/05 18:45

Silver	ND	0.0500		mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100		"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

B-8-M (B5J0381-13) Soil Sampled: 10/19/05 14:30 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-8-D (B5J0381-14) Soil Sampled: 10/19/05 14:37 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J26028	10/26/05	10/27/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100	"	"	5J26028	10/26/05	10/27/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-19-S (B5J0381-17) Soil Sampled: 10/19/05 10:45 Received: 10/19/05 18:45

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5J26054	10/26/05	10/31/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

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**Conventional Chemistry Parameters by APHA/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-1-S (B5J0381-01) Soil Sampled: 10/19/05 10:30 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	6.73		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-1-D (B5J0381-02) Soil Sampled: 10/19/05 10:35 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	8.15		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-2-S (B5J0381-03) Soil Sampled: 10/19/05 11:25 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	5.69		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-2-D (B5J0381-04) Soil Sampled: 10/19/05 11:27 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	7.10		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-3-S (B5J0381-05) Soil Sampled: 10/19/05 12:15 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	6.75		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-3-D (B5J0381-06) Soil Sampled: 10/19/05 12:20 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	3.74		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-4-S (B5J0381-07) Soil Sampled: 10/19/05 13:05 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	6.47		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-4-M (B5J0381-08) Soil Sampled: 10/19/05 13:10 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	5.38		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-4-D (B5J0381-09) Soil Sampled: 10/19/05 13:15 Received: 10/19/05 18:45										
Ammonia-Nitrogen	ND	4.37		mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	

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 1501 4th Ave, Suite 1400
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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

**Conventional Chemistry Parameters by APHA/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
B-5-S (B5J0381-10) Soil Sampled: 10/19/05 13:55 Received: 10/19/05 18:45									
Ammonia-Nitrogen	ND	4.75	mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-5-D (B5J0381-11) Soil Sampled: 10/19/05 14:00 Received: 10/19/05 18:45									
Ammonia-Nitrogen	15.3	4.29	mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-8-S (B5J0381-12) Soil Sampled: 10/19/05 14:25 Received: 10/19/05 18:45									
Ammonia-Nitrogen	4.87	4.07	mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-8-M (B5J0381-13) Soil Sampled: 10/19/05 14:30 Received: 10/19/05 18:45									
Ammonia-Nitrogen	113	5.59	mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
B-8-D (B5J0381-14) Soil Sampled: 10/19/05 14:37 Received: 10/19/05 18:45									
Ammonia-Nitrogen	214	5.50	mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	
COMP-1 (B5J0381-15) Soil Sampled: 10/19/05 15:35 Received: 10/19/05 18:45									
Cyanide (total)	1.16	0.683	mg/kg dry	1	5J28056	10/28/05	10/28/05	EPA 9010B Mod	
pH	9.31 J		pH Units	"	5J21065	10/21/05	10/21/05	EPA 9045C	
Sulfide	ND	56.1	mg/kg dry	"	5J21067	10/21/05	10/21/05	EPA 9030B	
COMP-2 (B5J0381-16) Soil Sampled: 10/19/05 15:55 Received: 10/19/05 18:45									
Cyanide (total)	0.740	0.740	mg/kg dry	1	5J28056	10/28/05	10/28/05	EPA 9010B Mod	
pH	8.81 J		pH Units	"	5J21065	10/21/05	10/21/05	EPA 9045C	
Sulfide	ND	58.5	mg/kg dry	"	5J21067	10/21/05	10/21/05	EPA 9030B	
B-19-S (B5J0381-17) Soil Sampled: 10/19/05 10:45 Received: 10/19/05 18:45									
Ammonia-Nitrogen	ND	4.33	mg/kg as N dry	1	5J30002	10/29/05	10/29/05	EPA 350.3	

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**Anions by EPA Method 300.0
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-1-S (B5J0381-01) Soil Sampled: 10/19/05 10:30 Received: 10/19/05 18:45										
Chloride	ND WS	5.81		mg/kg dry	1	5J27053	10/26/05	10/28/05	EPA 300.0	
B-1-D (B5J0381-02) Soil Sampled: 10/19/05 10:35 Received: 10/19/05 18:45										
Chloride	14.0	5.89		mg/kg dry	1	5J27053	10/26/05	10/28/05	EPA 300.0	
B-2-S (B5J0381-03) Soil Sampled: 10/19/05 11:25 Received: 10/19/05 18:45										
Chloride	523	57.1		mg/kg dry	10	5J27053	10/26/05	11/01/05	EPA 300.0	
B-2-D (B5J0381-04) Soil Sampled: 10/19/05 11:27 Received: 10/19/05 18:45										
Chloride	32.9	5.85		mg/kg dry	1	5J27053	10/26/05	10/28/05	EPA 300.0	
B-3-S (B5J0381-05) Soil Sampled: 10/19/05 12:15 Received: 10/19/05 18:45										
Chloride	21.4	6.13		mg/kg dry	1	5J27053	10/26/05	11/01/05	EPA 300.0	
B-3-D (B5J0381-06) Soil Sampled: 10/19/05 12:20 Received: 10/19/05 18:45										
Chloride	106	8.78		mg/kg dry	2	5J27053	10/26/05	11/01/05	EPA 300.0	
B-4-S (B5J0381-07) Soil Sampled: 10/19/05 13:05 Received: 10/19/05 18:45										
Chloride	11.6	5.87		mg/kg dry	1	5J27053	10/26/05	10/28/05	EPA 300.0	
B-4-M (B5J0381-08) Soil Sampled: 10/19/05 13:10 Received: 10/19/05 18:45										
Chloride	39.7	5.70		mg/kg dry	1	5J27053	10/26/05	11/01/05	EPA 300.0	
B-4-D (B5J0381-09) Soil Sampled: 10/19/05 13:15 Received: 10/19/05 18:45										
Chloride	16.4	5.94		mg/kg dry	1	5J27053	10/26/05	11/01/05	EPA 300.0	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

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Anions by EPA Method 300.0
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5-S (B5J0381-10) Soil Sampled: 10/19/05 13:55 Received: 10/19/05 18:45									
Chloride	6550	613	mg/kg dry	100	5J27053	10/26/05	11/01/05	EPA 300.0	
B-5-D (B5J0381-11) Soil Sampled: 10/19/05 14:00 Received: 10/19/05 18:45									
Chloride	104000	10500	mg/kg dry	2000	5J27053	10/26/05	11/01/05	EPA 300.0	
B-8-S (B5J0381-12) Soil Sampled: 10/19/05 14:25 Received: 10/19/05 18:45									
Chloride	781	507	mg/kg dry	100	5J27053	10/26/05	11/02/05	EPA 300.0	
B-8-M (B5J0381-13) Soil Sampled: 10/19/05 14:30 Received: 10/19/05 18:45									
Chloride	176000	98600	mg/kg dry	20000	5J27053	10/26/05	11/02/05	EPA 300.0	
B-8-D (B5J0381-14) Soil Sampled: 10/19/05 14:37 Received: 10/19/05 18:45									
Chloride	186000	22800	mg/kg dry	5000	5J27053	10/26/05	11/01/05	EPA 300.0	
B-19-S (B5J0381-17) Soil Sampled: 10/19/05 10:45 Received: 10/19/05 18:45									
Chloride	209 J	61.8	mg/kg dry	10	5J27053	10/26/05	11/01/05	EPA 300.0	

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**Physical Parameters by APHA/ASTM/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B-1-S (B5J0381-01) Soil Sampled: 10/19/05 10:30 Received: 10/19/05 18:45									
Dry Weight	66.1	1.00	%	1	5J27043	10/27/05	10/28/05	BSOPSP003R08	
B-1-D (B5J0381-02) Soil Sampled: 10/19/05 10:35 Received: 10/19/05 18:45									
Dry Weight	64.4	1.00	%	1	5J27043	10/27/05	10/28/05	BSOPSP003R08	
B-2-S (B5J0381-03) Soil Sampled: 10/19/05 11:25 Received: 10/19/05 18:45									
Dry Weight	70.0	1.00	%	1	5J27043	10/27/05	10/28/05	BSOPSP003R08	
B-2-D (B5J0381-04) Soil Sampled: 10/19/05 11:27 Received: 10/19/05 18:45									
Dry Weight	68.2	1.00	%	1	5J27043	10/27/05	10/28/05	BSOPSP003R08	
B-3-S (B5J0381-05) Soil Sampled: 10/19/05 12:15 Received: 10/19/05 18:45									
Dry Weight	64.3	1.00	%	1	5J27043	10/27/05	10/28/05	BSOPSP003R08	
B-3-D (B5J0381-06) Soil Sampled: 10/19/05 12:20 Received: 10/19/05 18:45									
Dry Weight	85.1	1.00	%	1	5J27043	10/27/05	10/28/05	BSOPSP003R08	
B-4-S (B5J0381-07) Soil Sampled: 10/19/05 13:05 Received: 10/19/05 18:45									
Dry Weight	67.5	1.00	%	1	5J27043	10/27/05	10/28/05	BSOPSP003R08	
B-4-M (B5J0381-08) Soil Sampled: 10/19/05 13:10 Received: 10/19/05 18:45									
Dry Weight	66.4	1.00	%	1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
B-4-D (B5J0381-09) Soil Sampled: 10/19/05 13:15 Received: 10/19/05 18:45									
Dry Weight	65.2	1.00	%	1	5J27044	10/27/05	10/28/05	BSOPSP003R08	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-5-S (B5J0381-10) Soil Sampled: 10/19/05 13:55 Received: 10/19/05 18:45										
Dry Weight	63.0	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
B-5-D (B5J0381-11) Soil Sampled: 10/19/05 14:00 Received: 10/19/05 18:45										
Dry Weight	73.7	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
B-8-S (B5J0381-12) Soil Sampled: 10/19/05 14:25 Received: 10/19/05 18:45										
Dry Weight	73.6	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
B-8-M (B5J0381-13) Soil Sampled: 10/19/05 14:30 Received: 10/19/05 18:45										
Dry Weight	77.0	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
B-8-D (B5J0381-14) Soil Sampled: 10/19/05 14:37 Received: 10/19/05 18:45										
Dry Weight	86.3	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
COMP-1 (B5J0381-15) Soil Sampled: 10/19/05 15:35 Received: 10/19/05 18:45										
Dry Weight	70.4	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
COMP-2 (B5J0381-16) Soil Sampled: 10/19/05 15:55 Received: 10/19/05 18:45										
Dry Weight	67.6	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	
B-19-S (B5J0381-17) Soil Sampled: 10/19/05 10:45 Received: 10/19/05 18:45										
Dry Weight	64.0	1.00	%		1	5J27044	10/27/05	10/28/05	BSOPSP003R08	

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Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Spokane

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
COMP-1 (B5J0381-15) Soil Sampled: 10/19/05 15:35 Received: 10/19/05 18:45										
Flashpoint	ND	20.0		°C	1	5100242	10/28/05	10/28/05	EPA 1010	F-01
COMP-2 (B5J0381-16) Soil Sampled: 10/19/05 15:55 Received: 10/19/05 18:45										
Flashpoint	ND	20.0		°C	1	5100242	10/28/05	10/28/05	EPA 1010	F-01

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5J26067: Prepared 10/26/05 Using EPA 3050B										
Blank (5J26067-BLK1)										
Copper	ND	0.500	mg/kg							
Nickel	ND	0.500	"							
Zinc	ND	5.00	"							
LCS (5J26067-BS1)										
Copper	37.6	0.500	mg/kg	40.0		94.0	80-120			
Nickel	38.4	0.500	"	40.0		96.0	80-120			
Zinc	40.9	5.00	"	40.0		102	80-120			
LCS Dup (5J26067-BSD1)										
Copper	37.8	0.500	mg/kg	40.0		94.5	80-120	0.531	20	
Nickel	38.4	0.500	"	40.0		96.0	80-120	0.00	20	
Zinc	41.7	5.00	"	40.0		104	80-120	1.94	20	
Matrix Spike (5J26067-MS1) Source: B5J0381-05										
Nickel	89.5	0.778	mg/kg dry	62.2	34.8	87.9	56-135			
Matrix Spike (5J26067-MS2) Source: B5J0381-05RE1										
Copper	1100	7.78	mg/kg dry	62.2	1090	16.1	33-156			Q-03
Zinc	659	77.8	"	62.2	529	209	20-160			Q-03
Matrix Spike Dup (5J26067-MSD1) Source: B5J0381-05										
Nickel	91.2	0.778	mg/kg dry	62.2	34.8	90.7	56-135	1.88	30	
Matrix Spike Dup (5J26067-MSD2) Source: B5J0381-05RE1										
Copper	1070	7.78	mg/kg dry	62.2	1090	-32.2	33-156	2.76	30	Q-03
Zinc	582	77.8	"	62.2	529	85.2	20-160	12.4	30	

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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26067: Prepared 10/26/05 Using EPA 3050B

Post Spike (5J26067-PS1)				Source: B5J0381-05						
Nickel	0.132		ug/ml	0.100	0.0448	87.2	75-125			
Post Spike (5J26067-PS2)				Source: B5J0381-05RE1						
Copper	1.55		ug/ml	0.101	1.41	139	75-125			Q-03
Zinc	0.750		"	0.100	0.681	69.0	75-125			Q-03

Batch 5K08025: Prepared 11/08/05 Using EPA 3050B

Blank (5K08025-BLK1)										
Potassium	ND	15.0	mg/kg							
Sodium	ND	15.0	"							
LCS (5K08025-BS1)										
Potassium	554	15.0	mg/kg	500		111	80-120			
Sodium	279	15.0	"	250		112	80-120			
LCS Dup (5K08025-BSD1)										
Potassium	563	15.0	mg/kg	500		113	80-120	1.61	20	
Sodium	273	15.0	"	250		109	80-120	2.17	20	
Matrix Spike (5K08025-MS1)				Source: B5J0381-05RE1						
Potassium	6350	23.3	mg/kg dry	778	4110	288	70-130			Q-03
Sodium	5420	23.3	"	389	4590	213	70-130			Q-03
Matrix Spike Dup (5K08025-MSD1)				Source: B5J0381-05RE1						
Potassium	6240	23.3	mg/kg dry	778	4110	274	70-130	1.75	30	Q-03
Sodium	6020	23.3	"	389	4590	368	70-130	10.5	30	Q-03

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting	Units	Spike	Source	%REC	RPD	RPD	Notes
		Limit		Level	Result	%REC			

Batch 5K08025: Prepared 11/08/05 Using EPA 3050B

Post Spike (5K08025-PS1)

Source: B5J0381-05RE1

Potassium	59.9		ug/ml	10.0	52.9	70.0	75-125		Q-03
Sodium	62.2		"	5.00	59.0	64.0	75-125		Q-03

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26011: Prepared 10/26/05 Using EPA 3010A

Blank (5J26011-BLK1)

Silver	ND	0.0500	mg/l
Arsenic	ND	0.100	"
Barium	ND	1.00	"
Cadmium	ND	0.0500	"
Chromium	ND	0.100	"
Lead	ND	0.100	"
Selenium	ND	0.100	"

LCS (5J26011-BS1)

Silver	10.2	0.0500	mg/l	10.0	102	80-120
Arsenic	50.6	0.100	"	50.0	101	80-120
Barium	49.2	1.00	"	50.0	98.4	80-120
Cadmium	50.4	0.0500	"	50.0	101	80-120
Chromium	50.1	0.100	"	50.0	100	80-120
Lead	51.7	0.100	"	50.0	103	80-120
Selenium	51.4	0.100	"	50.0	103	80-120

LCS Dup (5J26011-BSD1)

Silver	9.91	0.0500	mg/l	10.0	99.1	80-120	2.88	35
Arsenic	50.0	0.100	"	50.0	100	80-120	1.19	20
Barium	47.2	1.00	"	50.0	94.4	80-120	4.15	20
Cadmium	49.6	0.0500	"	50.0	99.2	80-120	1.60	20
Chromium	48.9	0.100	"	50.0	97.8	80-120	2.42	20
Lead	50.5	0.100	"	50.0	101	80-120	2.35	20
Selenium	50.5	0.100	"	50.0	101	80-120	1.77	20

Matrix Spike (5J26011-MS1)

Source: BSJ0381-05

Silver	9.73	0.0500	mg/l	10.0	ND	97.3	75-125
Arsenic	49.6	0.100	"	50.0	ND	99.2	80-120
Barium	46.8	1.00	"	50.0	0.537	92.5	80-120
Cadmium	49.0	0.0500	"	50.0	ND	98.0	80-120
Chromium	48.3	0.100	"	50.0	0.0440	96.5	80-120
Lead	49.9	0.100	"	50.0	ND	99.8	80-120
Selenium	50.2	0.100	"	50.0	0.0550	100	80-120

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26011: Prepared 10/26/05 Using EPA 3010A

Matrix Spike Dup (5J26011-MSD1)

Source: B5J0381-05

Silver	10.1	0.0500	mg/l	10.0	ND	101	75-125	3.73	35	
Arsenic	51.7	0.100	"	50.0	ND	103	80-120	4.15	20	
Barium	48.3	1.00	"	50.0	0.537	95.5	80-120	3.15	20	
Cadmium	51.1	0.0500	"	50.0	ND	102	80-120	4.20	20	
Chromium	50.0	0.100	"	50.0	0.0440	99.9	80-120	3.46	20	
Lead	52.1	0.100	"	50.0	ND	104	80-120	4.31	20	
Selenium	52.3	0.100	"	50.0	0.0550	104	80-120	4.10	20	

Batch 5J26028: Prepared 10/26/05 Using EPA 3010A

Blank (5J26028-BLK1)

Silver	ND	0.0500	mg/l							
Arsenic	ND	0.100	"							
Barium	ND	1.00	"							
Cadmium	ND	0.0500	"							
Chromium	ND	0.100	"							
Lead	ND	0.100	"							
Selenium	ND	0.100	"							

LCS (5J26028-BS1)

Silver	9.99	0.0500	mg/l	10.0		99.9	80-120			
Arsenic	49.4	0.100	"	50.0		98.8	80-120			
Barium	47.6	1.00	"	50.0		95.2	80-120			
Cadmium	49.8	0.0500	"	50.0		99.6	80-120			
Chromium	49.0	0.100	"	50.0		98.0	80-120			
Lead	51.1	0.100	"	50.0		102	80-120			
Selenium	50.4	0.100	"	50.0		101	80-120			

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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26028: Prepared 10/26/05 Using EPA 3010A

LCS Dup (5J26028-BSD1)

Silver	10.2	0.0500	mg/l	10.0		102	80-120	2.08	35	
Arsenic	52.0	0.100	"	50.0		104	80-120	5.13	20	
Barium	48.9	1.00	"	50.0		97.8	80-120	2.69	20	
Cadmium	52.1	0.0500	"	50.0		104	80-120	4.51	20	
Chromium	50.9	0.100	"	50.0		102	80-120	3.80	20	
Lead	53.6	0.100	"	50.0		107	80-120	4.78	20	
Selenium	52.7	0.100	"	50.0		105	80-120	4.46	20	

Matrix Spike (5J26028-MS1)

Source: B5J0381-07

Silver	10.4	0.0500	mg/l	10.0	ND	104	75-125			
Arsenic	52.6	0.100	"	50.0	ND	105	80-120			
Barium	49.6	1.00	"	50.0	0.215	98.8	80-120			
Cadmium	52.6	0.0500	"	50.0	0.0100	105	80-120			
Chromium	51.5	0.100	"	50.0	0.0610	103	80-120			
Lead	53.8	0.100	"	50.0	ND	108	80-120			
Selenium	53.2	0.100	"	50.0	ND	106	80-120			

Matrix Spike Dup (5J26028-MSD1)

Source: B5J0381-07

Silver	10.5	0.0500	mg/l	10.0	ND	105	75-125	0.957	35	
Arsenic	53.1	0.100	"	50.0	ND	106	80-120	0.946	20	
Barium	49.9	1.00	"	50.0	0.215	99.4	80-120	0.603	20	
Cadmium	53.0	0.0500	"	50.0	0.0100	106	80-120	0.758	20	
Chromium	51.7	0.100	"	50.0	0.0610	103	80-120	0.388	20	
Lead	54.1	0.100	"	50.0	ND	108	80-120	0.556	20	
Selenium	53.4	0.100	"	50.0	ND	107	80-120	0.375	20	

Batch 5J26053: Prepared 10/26/05 Using EPA 7470A

Blank (5J26053-BLK1)

Mercury	ND	0.00100	mg/l							
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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26053: Prepared 10/26/05 Using EPA 7470A

Blank (5J26053-BLK2)

Mercury ND 0.00100 mg/l

Blank (5J26053-BLK3)

Mercury ND 0.00100 mg/l

LCS (5J26053-BS1)

Mercury 0.00525 0.00100 mg/l 0.00500 105 80-120

LCS Dup (5J26053-BSD1)

Mercury 0.00538 0.00100 mg/l 0.00500 108 80-120 2.45 20

Matrix Spike (5J26053-MS1)

Source: B5J0381-05

Mercury 0.0135 0.00250 mg/l 0.0125 ND 108 75-125

Matrix Spike Dup (5J26053-MSD1)

Source: B5J0381-05

Mercury 0.0136 0.00250 mg/l 0.0125 ND 109 75-125 0.738 20

Batch 5J26054: Prepared 10/26/05 Using EPA 7470A

Blank (5J26054-BLK1)

Mercury ND 0.00100 mg/l

LCS (5J26054-BS1)

Mercury 0.00483 0.00100 mg/l 0.00500 96.6 80-120

LCS Dup (5J26054-BSD1)

Mercury 0.00523 0.00100 mg/l 0.00500 105 80-120 7.95 20

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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26054: Prepared 10/26/05 Using EPA 7470A

Matrix Spike (5J26054-MS1)

Source: B5J0381-07

Mercury	0.0122	0.00250	mg/l	0.0125	ND	97.6	75-125			
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Matrix Spike Dup (5J26054-MSD1)

Source: B5J0381-07

Mercury	0.0129	0.00250	mg/l	0.0125	ND	103	75-125	5.58	20	
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Batch 5J28013: Prepared 10/28/05 Using EPA 3010A

Blank (5J28013-BLK1)

Silver	ND	0.0500	mg/l							
Arsenic	ND	0.100	"							
Barium	ND	1.00	"							
Cadmium	ND	0.0500	"							
Chromium	ND	0.100	"							
Lead	ND	0.100	"							
Selenium	ND	0.100	"							

LCS (5J28013-BS1)

Silver	0.940	0.0500	mg/l	1.00		94.0	80-120			
Arsenic	4.78	0.100	"	5.00		95.6	80-120			
Barium	4.58	1.00	"	5.00		91.6	80-120			
Cadmium	4.77	0.0500	"	5.00		95.4	80-120			
Chromium	4.70	0.100	"	5.00		94.0	80-120			
Lead	4.82	0.100	"	5.00		96.4	80-120			
Selenium	4.72	0.100	"	5.00		94.4	80-120			

LCS Dup (5J28013-BSD1)

Silver	0.958	0.0500	mg/l	1.00		95.8	80-120	1.90	35	
Arsenic	4.89	0.100	"	5.00		97.8	80-120	2.28	20	
Barium	4.65	1.00	"	5.00		93.0	80-120	1.52	20	
Cadmium	4.88	0.0500	"	5.00		97.6	80-120	2.28	20	
Chromium	4.80	0.100	"	5.00		96.0	80-120	2.11	20	
Lead	4.97	0.100	"	5.00		99.4	80-120	3.06	20	
Selenium	4.86	0.100	"	5.00		97.2	80-120	2.92	20	

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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch SJ28013: Prepared 10/28/05 Using EPA 3010A

Matrix Spike (SJ28013-MS1)

Source: B5J0465-10

Silver	0.963	0.0500	mg/l	1.00	ND	96.3	75-125			
Arsenic	4.92	0.100	"	5.00	ND	98.4	80-120			
Barium	4.66	1.00	"	5.00	0.0219	92.8	80-120			
Cadmium	4.86	0.0500	"	5.00	ND	97.2	80-120			
Chromium	4.79	0.100	"	5.00	ND	95.8	80-120			
Lead	4.96	0.100	"	5.00	ND	99.2	80-120			
Selenium	4.87	0.100	"	5.00	ND	97.4	80-120			

Matrix Spike Dup (5J28013-MSD1)

Source: B5J0465-10

Silver	0.949	0.0500	mg/l	1.00	ND	94.9	75-125	1.46	35	
Arsenic	4.86	0.100	"	5.00	ND	97.2	80-120	1.23	20	
Barium	4.60	1.00	"	5.00	0.0219	91.6	80-120	1.30	20	
Cadmium	4.79	0.0500	"	5.00	ND	95.8	80-120	1.45	20	
Chromium	4.71	0.100	"	5.00	ND	94.2	80-120	1.68	20	
Lead	4.90	0.100	"	5.00	ND	98.0	80-120	1.22	20	
Selenium	4.86	0.100	"	5.00	ND	97.2	80-120	0.206	20	

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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5J21065: Prepared 10/21/05 Using General Preparation

Duplicate (5J21065-DUP1)				Source: B5J0381-15						
pH	9.30		pH Units		9.31			0.107	10	

Batch 5J21067: Prepared 10/21/05 Using General Preparation

Blank (5J21067-BLK1)										
Sulfide	ND	39.2	mg/kg							

LCS (5J21067-BS1)										
Sulfide	85.7	38.8	mg/kg	98.6		86.9	75-125			

LCS (5J21067-BS2)										
Sulfide	89.1	39.1	mg/kg	99.4		89.6	75-125			

LCS (5J21067-BS3)										
Sulfide	84.0	38.9	mg/kg	98.9		84.9	75-125			

LCS Dup (5J21067-BSD1)										
Sulfide	87.7	38.0	mg/kg	96.5		90.9	75-125	2.31	25	

Duplicate (5J21067-DUP1)				Source: B5J0381-15						
Sulfide	ND	56.4	mg/kg dry		ND			NA	30	

Matrix Spike (5J21067-MS1)				Source: B5J0381-15						
Sulfide	45.3	55.9	mg/kg dry	142	ND	31.9	20-120			

Batch 5J28056: Prepared 10/28/05 Using General Preparation

Blank (5J28056-BLK1)										
Cyanide (total)	ND	0.500	mg/kg							

North Creek Analytical - Bothell

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Jeff Gerdes

Jeff Gerdes, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

**Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J28056: Prepared 10/28/05 Using General Preparation

Blank (5J28056-BLK2)

Cyanide (total) ND 0.500 mg/kg

LCS (5J28056-BS1)

Cyanide (total) 5.10 0.500 mg/kg 4.97 103 85-115

LCS (5J28056-BS2)

Cyanide (total) 4.95 0.500 mg/kg 4.97 99.6 85-115

LCS Dup (5J28056-BSD1)

Cyanide (total) 5.00 0.500 mg/kg 4.97 101 85-115 1.98 30

Duplicate (5J28056-DUP1)

Source: B5J0381-15

Cyanide (total) 1.16 0.683 mg/kg dry 1.16 0.00 46

Matrix Spike (5J28056-MS1)

Source: B5J0381-15

Cyanide (total) 7.30 0.664 mg/kg dry 6.60 1.16 93.0 27-138

Batch 5J30002: Prepared 10/29/05 Using General Preparation

Blank (5J30002-BLK1)

Ammonia-Nitrogen ND 5.00 mg/kg as N

LCS (5J30002-BS1)

Ammonia-Nitrogen 245 5.00 mg/kg as N 250 98.0 75-125

LCS Dup (5J30002-BSD1)

Ammonia-Nitrogen 243 5.00 mg/kg as N 250 97.2 75-125 0.820 25

North Creek Analytical - Bothell

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North Creek Analytical, Inc.
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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 16:48
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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J30002: Prepared 10/29/05 Using General Preparation

Duplicate (5J30002-DUP1)

Source: B5J0381-05

Ammonia-Nitrogen	2.24	7.26	mg/kg as N dry		2.24			0.00	30	
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Matrix Spike (5J30002-MS1)

Source: B5J0381-05

Ammonia-Nitrogen	240	5.28	mg/kg as N dry	264	2.24	90.1	59-127			
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URS Corporation
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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

Anions by EPA Method 300.0 - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5J27053: Prepared 10/26/05 Using General Preparation

Blank (5J27053-BLK1)

Chloride	ND	4.00	mg/kg							
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LCS (5J27053-BS1)

Chloride	21.0	4.00	mg/kg	20.0		105	90-110			
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LCS Dup (5J27053-BSD1)

Chloride	21.3	4.00	mg/kg	20.0		106	90-110	1.42	10	
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Matrix Spike (5J27053-MS1)

Source: BSJ0381-05

Chloride	59.8	12.2	mg/kg dry	30.5	21.4	126	62-157			
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Matrix Spike Dup (5J27053-MSD1)

Source: BSJ0381-05

Chloride	53.0	6.08	mg/kg dry	30.4	21.4	104	62-157	12.1	25	
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North Creek Analytical - Bothell

Jeff Gerdes, Project Manager

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 16:48
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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J27043: Prepared 10/27/05 Using Dry Weight

Blank (5J27043-BLK1)

Dry Weight	99.9	1.00	%							
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Batch 5J27044: Prepared 10/27/05 Using Dry Weight

Blank (5J27044-BLK1)

Dry Weight	100	1.00	%							
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North Creek Analytical - Bothell

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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Spokane

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5100242: Prepared 10/28/05 Using Wet Chem

Duplicate (5100242-DUP1)

Source: S5J0077-01

Flashpoint	ND	20.0	°C		ND			NA	10	F-01
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North Creek Analytical - Bothell

Jeff Gerdes, Project Manager

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North Creek Analytical, Inc.
 Environmental Laboratory Network

Page 33 of 34



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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 16:48

Notes and Definitions

- F-01 No flash detected up to 100 °C
- Q-03 The percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

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CHAIN OF CUSTODY REPORT

Work Order #: B510381

NCA CLIENT: <u>URS Corporation</u>		INVOICE TO: <u>URS</u>		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify: _____ <small>* Turnaround requests less than standard may incur Rush Charge.</small>											
REPORT TO: <u>Vance Atkins</u> ADDRESS: <u>1501 4th Ave, Suite 1400</u> <u>Seattle WA 98101</u> PHONE: <u>206-438-2012</u> FAX: <u>206-438-2699</u>		P.O. NUMBER: <u>33757742.00001</u>													
PROJECT NAME: <u>Navalco</u>		PRESERVATIVE													
PROJECT NUMBER: <u>33757742</u>		REQUESTED ANALYSES													
SAMPLED BY: <u>M. Hommeyer</u>															
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOTAL METALS (6000)	ICLF (1511)	Ammonia (350.3)	CHLORIDE (300.0)	FISH BIOASSAY	RAT BIOASSAY	PH (9085C)	SCOURTAL (1030)	TOTAL CYANIDE (7010)	TOTAL SULFIDE (7020)	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 B-1-S	10/19/05 1030	X	X	X	X							S	6	0-4	01
2 B-1-D	1035	X	X	X	X							S	6	4-8	02
3 B-2-S	1025	X	X	X	X							S	6	1-5	03
4 B-2-D	1022	X	X	X	X							S	6	5-10	04
5 B-3-S	1215	X	X	X	X							S	12	1-4	05
6 B-3-D	1220	X	X	X	X							S	6	4-9	06
7 B-4-S	1305	X	X	X	X							S	6	1-4	07
8 B-4-m	1310	X	X	X	X							S	6	4-8	08
9 B-4-D	1315	X	X	X	X							S	6	8-11	09
10 B-5-S	1355	X	X	X	X							S	6	0-5	10
RELEASED BY: <u>M. Hommeyer</u>		DATE: <u>10-19-05</u>		RECEIVED BY: <u>Jon Hollers</u>		DATE: <u>10/19/05</u>									
PRINT NAME: <u>MATT Hommeyer</u> FIRM: <u>URS</u>		TIME: <u>1845</u>		PRINT NAME: <u>Jon Hollers</u> FIRM: <u>NCA</u>		TIME: <u>1645</u>									
RELEASED BY:		DATE:		RECEIVED BY:		DATE:									
PRINT NAME:		FIRM:		PRINT NAME:		FIRM:									
TIME:		TIME:		TIME:		TIME:									
ADDITIONAL REMARKS: <u>B-3-S includes volume for MSMS D, hold bioassays pending other analyses</u>												TEMP: <u>16.00</u>			
COC REV 09/04 <u>*TOTAL METALS = COPPER, NICKEL, ZINC, SODIUM, POTASSIUM</u>												<u>w/o</u>	PAGE OF		



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CHAIN OF CUSTODY REPORT

Work Order #:

NCA CLIENT: <u>WRS Corporation</u>				INVOICE TO: <u>WRS</u>				TURNAROUND REQUEST In Business Days*																			
REPORT TO: <u>Vance Atkins</u>				P.O. NUMBER: <u>33757742.00001</u>				Organic & Inorganic Analyses																			
ADDRESS: <u>1501 4th Ave, S. b. 1400</u> <u>Seattle, WA 98101</u>								<input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>hrs</small>																			
PHONE: <u>206-438-2012</u> FAX: <u>206-438-2699</u>				PRESERVATIVE				Petroleum Hydrocarbon Analyses																			
PROJECT NAME: <u>Muralco</u>				REQUESTED ANALYSES				<input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>hrs</small>																			
PROJECT NUMBER: <u>33757742</u>								OTHER Specify:				* Turnaround Report Issued on needed regular basis only.															
SAMPLED BY: <u>M. Blomquist</u>				<table border="1"> <tr> <th>TOTAL METALS (6000)</th> <th>TCLP (1311 & 1311E) (6000/3000)</th> <th>AMMONIUM (350.3)</th> <th>CHLORIDE (300.0)</th> <th>FIEN</th> <th>BIOASSAY</th> <th>PLAT</th> <th>BIOASSAY</th> <th>PH (9045C)</th> <th>HEAVY METALS (1000)</th> <th>TOTAL PHOSPHORUS (9010)</th> <th>SULFATE (9020)</th> </tr> </table>				TOTAL METALS (6000)	TCLP (1311 & 1311E) (6000/3000)	AMMONIUM (350.3)	CHLORIDE (300.0)	FIEN	BIOASSAY	PLAT	BIOASSAY	PH (9045C)	HEAVY METALS (1000)	TOTAL PHOSPHORUS (9010)	SULFATE (9020)	MATRIX (W, S, O)				# OF CONT.			
TOTAL METALS (6000)	TCLP (1311 & 1311E) (6000/3000)	AMMONIUM (350.3)	CHLORIDE (300.0)	FIEN	BIOASSAY	PLAT	BIOASSAY	PH (9045C)	HEAVY METALS (1000)	TOTAL PHOSPHORUS (9010)	SULFATE (9020)																
CLIENT SAMPLE IDENTIFICATION				SAMPLING DATE/TIME				LOCATION / COMMENTS				NCA WO ID															
1 B-5-D				10/19/05 1400				X X X X				S 6 5-10 11															
2 B-8-S				1425				X X X X				S 6 1-5 12															
3 B-8-m				1430				X X X X				S 6 5-9 13															
4 B-8-D				1437				X X X X				S 6 9-14 14															
5 COMP-1				1535				X X X X				S 6 1-10 15															
6 COMP-2				1555				X X X X				S 6 1-11 16															
7 B-19-S				1045				X X X X				S 6 0-4 17															
8																											
9																											
10																											
RELEASED BY: <u>M. Blomquist</u>				DATE: <u>10-19-05</u>				RECEIVED BY: <u>Jon Hollers</u>				DATE: <u>10/19/05</u>															
PRINT NAME: <u>Matt Blomquist</u> FIRM: <u>WRS</u>				TIME: <u>1845</u>				PRINT NAME: <u>Jon Hollers</u> FIRM: <u>NCA</u>				TIME: <u>1845</u>															
RELEASED BY:				DATE:				RECEIVED BY:				DATE:															
PRINT NAME:				FIRM:				PRINT NAME:				FIRM:															
ADDITIONAL REMARKS:				DATE:				PRINT NAME:				TIME:															
COC REV 0904				call Vance Atkins 206-619-5957 w/ questions hold bioassays (Ecology method 80-12) pending results of other analyses * TOTAL METALS = Cu, Zn, Na, K, Ni				TEMP: <u>16.0°C</u>				PAGE OF															

SUBCONTRACT ORDER
North Creek Analytical - Bothell
B5J0381

55J0132

SENDING LABORATORY:

North Creek Analytical - Bothell
 11720 North Creek Parkway North, Suite 400
 Bothell, WA 98011-8223
 Phone: (425) 420-9200
 Fax: (425) 420-9210
 Project Manager: Jeff Gerdes

RECEIVING LABORATORY:

North Creek Analytical - Spokane
 11922 E 1st Ave
 Spokane, WA/USA 99206
 Phone :509-924-9200
 Fax: 509-924-9290

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: B5J0381-15 Ignitability-1010 Containers Supplied: 4 oz. jar (A)	Soil 11/02/05 17:00	Sampled: 10/19/05 15:35 11/16/05 15:35	[REDACTED]	Sub contract to Spokane.
Sample ID: B5J0381-16 Ignitability-1010 Containers Supplied: 4 oz. jar (A)	Soil 11/02/05 17:00	Sampled: 10/19/05 15:55 11/16/05 15:55	[REDACTED]	Sub contract to Spokane.

<i>Cathy Gambale</i>	<i>10/20/05</i>	<i>Michael [unclear]</i>	<i>10/21/05</i>
Released By	Date	Received By	Date
			<i>Rick @ 328</i>
Released By	Date	Received By	Date



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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-12-S	B5J0465-01	Soil	10/21/05 07:55	10/21/05 15:00
B-12-M	B5J0465-02	Soil	10/21/05 08:00	10/21/05 15:00
B-12-D	B5J0465-03	Soil	10/21/05 08:05	10/21/05 15:00
B-13-S	B5J0465-04	Soil	10/21/05 08:30	10/21/05 15:00
B-13-D	B5J0465-05	Soil	10/21/05 08:35	10/21/05 15:00
B-14-S	B5J0465-06	Soil	10/21/05 08:45	10/21/05 15:00
B-14-D	B5J0465-07	Soil	10/21/05 08:50	10/21/05 15:00
B-15-S	B5J0465-08	Soil	10/21/05 09:00	10/21/05 15:00
B-15-D	B5J0465-09	Soil	10/21/05 09:05	10/21/05 15:00
B-18-S	B5J0465-10	Soil	10/21/05 09:20	10/21/05 15:00
B-17-S	B5J0465-11	Soil	10/21/05 09:35	10/21/05 15:00
B-17-M	B5J0465-12	Soil	10/21/05 09:40	10/21/05 15:00
B-17-D	B5J0465-13	Soil	10/21/05 09:45	10/21/05 15:00
B-16-S	B5J0465-14	Soil	10/21/05 10:05	10/21/05 15:00
B-16-M	B5J0465-15	Soil	10/21/05 10:10	10/21/05 15:00
B-16-D	B5J0465-16	Soil	10/21/05 10:15	10/21/05 15:00
B-21-S	B5J0465-17	Soil	10/21/05 10:30	10/21/05 15:00
COMP-6	B5J0465-18	Soil	10/21/05 12:55	10/21/05 15:00
COMP-7	B5J0465-19	Soil	10/21/05 13:00	10/21/05 15:00

North Creek Analytical - Bothell

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:25
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**Total Metals by EPA 6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B-12-S (B5J0465-01) Soil Sampled: 10/21/05 07:55 Received: 10/21/05 15:00									
Nickel	80.2	0.620	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B-12-S (B5J0465-01RE1) Soil Sampled: 10/21/05 07:55 Received: 10/21/05 15:00									
Copper	3210	31.0	mg/kg dry	50	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	29600	2190	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	17100	2190	"	"	"	"	"	"	
Zinc	3470	310	"	50	5J26068	10/26/05	11/08/05	EPA 6020	
B-12-M (B5J0465-02) Soil Sampled: 10/21/05 08:00 Received: 10/21/05 15:00									
Nickel	57.9	0.661	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B-12-M (B5J0465-02RE1) Soil Sampled: 10/21/05 08:00 Received: 10/21/05 15:00									
Copper	1930	6.61	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	31600	2310	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	15100	2310	"	"	"	"	"	"	
Zinc	1650	66.1	"	10	5J26068	10/26/05	11/08/05	EPA 6020	
B-12-D (B5J0465-03) Soil Sampled: 10/21/05 08:05 Received: 10/21/05 15:00									
Nickel	145	0.799	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B-12-D (B5J0465-03RE1) Soil Sampled: 10/21/05 08:05 Received: 10/21/05 15:00									
Copper	2950	16.0	mg/kg dry	20	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	128000	2090	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	38400	2090	"	"	"	"	"	"	
Zinc	2150	160	"	20	5J26068	10/26/05	11/08/05	EPA 6020	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-13-S (B5J0465-04) Soil Sampled: 10/21/05 08:30 Received: 10/21/05 15:00									
Nickel	40.9	0.517	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B-13-S (B5J0465-04RE1) Soil Sampled: 10/21/05 08:30 Received: 10/21/05 15:00									
Copper	1360	5.17	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	31400	1650	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	19200	1650	"	"	"	"	"	"	
Zinc	934	51.7	"	10	5J26068	10/26/05	11/08/05	EPA 6020	
B-13-D (B5J0465-05) Soil Sampled: 10/21/05 08:35 Received: 10/21/05 15:00									
Nickel	64.0	0.530	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B-13-D (B5J0465-05RE1) Soil Sampled: 10/21/05 08:35 Received: 10/21/05 15:00									
Copper	1340	5.30	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	114000	1580	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	42000	1580	"	"	"	"	"	"	
Zinc	1400	53.0	"	10	5J26068	10/26/05	11/08/05	EPA 6020	
B-14-S (B5J0465-06) Soil Sampled: 10/21/05 08:45 Received: 10/21/05 15:00									
Nickel	55.9	0.657	mg/kg dry	1	5J26068	10/26/05	11/01/05	EPA 6020	
B-14-S (B5J0465-06RE1) Soil Sampled: 10/21/05 08:45 Received: 10/21/05 15:00									
Copper	1490	6.57	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	27100	2100	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	15000	2100	"	"	"	"	"	"	
Zinc	1000	65.7	"	10	5J26068	10/26/05	11/08/05	EPA 6020	

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**Total Metals by EPA 6000/7000 Series Methods
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-14-D (B5J0465-07) Soil Sampled: 10/21/05 08:50 Received: 10/21/05 15:00									
Nickel	52.8	0.581	mg/kg dry	1	5J26068	10/26/05	11/02/05	EPA 6020	
B-14-D (B5J0465-07RE1) Soil Sampled: 10/21/05 08:50 Received: 10/21/05 15:00									
Copper	1670	5.81	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	83500	2010	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	43100	2010	"	"	"	"	"	"	
Zinc	1400	58.1	"	10	5J26068	10/26/05	11/08/05	EPA 6020	
B-15-S (B5J0465-08) Soil Sampled: 10/21/05 09:00 Received: 10/21/05 15:00									
Nickel	40.6	0.728	mg/kg dry	1	5J26068	10/26/05	11/02/05	EPA 6020	
B-15-S (B5J0465-08RE1) Soil Sampled: 10/21/05 09:00 Received: 10/21/05 15:00									
Copper	1660	7.28	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Potassium	90400	1820	"	100	5K08027	11/08/05	11/12/05	EPA 6010B	
Sodium	35100	1820	"	"	"	"	"	"	
Zinc	1270	72.8	"	10	5J26068	10/26/05	11/08/05	EPA 6020	
B-15-D (B5J0465-09) Soil Sampled: 10/21/05 09:05 Received: 10/21/05 15:00									
Potassium	138000	1940	mg/kg dry	100	5K04052	11/04/05	11/12/05	EPA 6010B	Q-18
Sodium	59200	1940	"	"	"	"	"	"	
Nickel	49.6	0.545	"	1	5J26068	10/26/05	11/02/05	EPA 6020	
B-15-D (B5J0465-09RE1) Soil Sampled: 10/21/05 09:05 Received: 10/21/05 15:00									
Copper	1400	5.45	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Zinc	1200	54.5	"	"	"	"	"	"	

**11.15.05*

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

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Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-18-S (B5J0465-10) Soil Sampled: 10/21/05 09:20 Received: 10/21/05 15:00									
Potassium	13700	2110	mg/kg dry	100	5K04052	11/04/05	11/12/05	EPA 6010B	Q-18
Sodium	6950	21.1	"	1	"	"	11/11/05	"	
Nickel	56.6	0.704	"	"	5J26069	10/26/05	10/28/05	EPA 6020	
B-18-S (B5J0465-10RE1) Soil Sampled: 10/21/05 09:20 Received: 10/21/05 15:00									
Copper	2010	7.04	mg/kg dry	10	5J26069	10/26/05	11/01/05	EPA 6020	
Zinc	1580	70.4	"	"	"	"	"	"	
B-17-S (B5J0465-11) Soil Sampled: 10/21/05 09:35 Received: 10/21/05 15:00									
Potassium	102000	1740	mg/kg dry	100	5K04052	11/04/05	11/12/05	EPA 6010B	Q-18
Sodium	70200	1740	"	"	"	"	"	"	
Nickel	35.8	0.647	"	1	5J26068	10/26/05	11/02/05	EPA 6020	
B-17-S (B5J0465-11RE1) Soil Sampled: 10/21/05 09:35 Received: 10/21/05 15:00									
Copper	1030	6.47	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Zinc	735	64.7	"	"	"	"	"	"	
B-17-M (B5J0465-12) Soil Sampled: 10/21/05 09:40 Received: 10/21/05 15:00									
Potassium	122000	1780	mg/kg dry	100	5K04052	11/04/05	11/12/05	EPA 6010B	Q-18
Sodium	84900	1780	"	"	"	"	"	"	
Nickel	27.0	0.617	"	1	5J26068	10/26/05	11/02/05	EPA 6020	
B-17-M (B5J0465-12RE1) Soil Sampled: 10/21/05 09:40 Received: 10/21/05 15:00									
Copper	766	6.17	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Zinc	661	61.7	"	"	"	"	"	"	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-17-D (B5J0465-13) Soil Sampled: 10/21/05 09:45 Received: 10/21/05 15:00									
Potassium	84200	1730	mg/kg dry	100	5K04052	11/04/05	11/12/05	EPA 6010B	Q-18
Sodium	53100	1730	"	"	"	"	"	"	"
Nickel	109	0.635	"	1	5J26068	10/26/05	11/02/05	EPA 6020	
B-17-D (B5J0465-13RE1) Soil Sampled: 10/21/05 09:45 Received: 10/21/05 15:00									
Copper	9610	63.5	mg/kg dry	100	5J26068	10/26/05	11/08/05	EPA 6020	
Zinc	6730	635	"	"	"	"	"	"	
B-16-S (B5J0465-14) Soil Sampled: 10/21/05 10:05 Received: 10/21/05 15:00									
Potassium	145000	1810	mg/kg dry	100	5K04052	11/04/05	11/12/05	EPA 6010B	Q-18
Sodium	49200	1810	"	"	"	"	"	"	"
Nickel	27.9	0.628	"	1	5J26068	10/26/05	11/02/05	EPA 6020	
B-16-S (B5J0465-14RE1) Soil Sampled: 10/21/05 10:05 Received: 10/21/05 15:00									
Copper	918	6.28	mg/kg dry	10	5J26068	10/26/05	11/08/05	EPA 6020	
Zinc	739	62.8	"	"	"	"	"	"	
B-16-M (B5J0465-15) Soil Sampled: 10/21/05 10:10 Received: 10/21/05 15:00									
Potassium	130000	1750	mg/kg dry	100	5K04052	11/04/05	11/12/05	EPA 6010B	Q-18
Sodium	107000	1750	"	"	"	"	"	"	"
Nickel	28.0	0.606	"	1	5J26069	10/26/05	10/28/05	EPA 6020	
B-16-M (B5J0465-15RE1) Soil Sampled: 10/21/05 10:10 Received: 10/21/05 15:00									
Copper	1240	6.06	mg/kg dry	10	5J26069	10/26/05	11/01/05	EPA 6020	
Zinc	584	60.6	"	"	"	"	"	"	

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 Project Manager: Vance Atkins

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Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-16-D (B5J0465-16) Soil Sampled: 10/21/05 10:15 Received: 10/21/05 15:00										
Potassium	90500	1760		mg/kg dry	100	5K04052	11/04/05	11/14/05	EPA 6010B	Q-18
Sodium	75400	1760		"	"	"	"	11/12/05	"	
Nickel	45.7	0.594		"	1	5J26069	10/26/05	10/28/05	EPA 6020	
B-16-D (B5J0465-16RE1) Soil Sampled: 10/21/05 10:15 Received: 10/21/05 15:00										
Copper	1090	5.94		mg/kg dry	10	5J26069	10/26/05	11/01/05	EPA 6020	
Zinc	858	59.4		"	"	"	"	"	"	
B-21-S (B5J0465-17) Soil Sampled: 10/21/05 10:30 Received: 10/21/05 15:00										
Potassium	119000	1810		mg/kg dry	100	5K04052	11/04/05	11/14/05	EPA 6010B	Q-18
Sodium	72200	1810		"	"	"	"	11/12/05	"	
Nickel	38.3	0.545		"	1	5J26069	10/26/05	10/28/05	EPA 6020	
B-21-S (B5J0465-17RE1) Soil Sampled: 10/21/05 10:30 Received: 10/21/05 15:00										
Copper	1620	5.45		mg/kg dry	10	5J26069	10/26/05	11/01/05	EPA 6020	
Zinc	1850	54.5		"	"	"	"	"	"	

11-15-05

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URS Corporation Project: Maralco
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 Seattle, WA/USA 98101-1616 Project Manager: Vance Atkins Reported: 11/14/05 17:25

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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B-12-S (B5J0465-01) Soil Sampled: 10/21/05 07:55 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-12-M (B5J0465-02) Soil Sampled: 10/21/05 08:00 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-12-D (B5J0465-03) Soil Sampled: 10/21/05 08:05 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Jeff Gerdes

Jeff Gerdes, Project Manager

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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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B-13-S (B5J0465-04) Soil Sampled: 10/21/05 08:30 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-13-D (B5J0465-05) Soil Sampled: 10/21/05 08:35 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-14-S (B5J0465-06) Soil Sampled: 10/21/05 08:45 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

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Jeff Gerdes

Jeff Gerdes, Project Manager

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:25
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TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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B-14-D (B5J0465-07) Soil Sampled: 10/21/05 08:50 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-15-S (B5J0465-08) Soil Sampled: 10/21/05 09:00 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-15-D (B5J0465-09) Soil Sampled: 10/21/05 09:05 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

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URS Corporation
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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B-18-S (B5J0465-10) Soil Sampled: 10/21/05 09:20 Received: 10/21/05 15:00									
Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	
B-17-S (B5J0465-11) Soil Sampled: 10/21/05 09:35 Received: 10/21/05 15:00									
Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	
B-17-M (B5J0465-12) Soil Sampled: 10/21/05 09:40 Received: 10/21/05 15:00									
Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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B-17-D (B5J0465-13) Soil Sampled: 10/21/05 09:45 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-16-S (B5J0465-14) Soil Sampled: 10/21/05 10:05 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

B-16-M (B5J0465-15) Soil Sampled: 10/21/05 10:10 Received: 10/21/05 15:00

Silver	ND	0.0500	mg/l	1	5J28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100	"	"	"	"	"	"	
Barium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	0.0500	"	"	"	"	"	"	
Chromium	ND	0.100	"	"	"	"	"	"	
Mercury	ND	0.00250	"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100	"	"	5J28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100	"	"	"	"	"	"	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
B-16-D (B5J0465-16) Soil Sampled: 10/21/05 10:15 Received: 10/21/05 15:00										
Silver	ND	0.0500		mg/l	1	SJ28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100		"	"	SJ28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	
B-21-S (B5J0465-17) Soil Sampled: 10/21/05 10:30 Received: 10/21/05 15:00										
Silver	ND	0.0500		mg/l	1	SJ28013	10/28/05	10/28/05	EPA 6010B	
Arsenic	ND	0.100		"	"	"	"	"	"	
Barium	ND	1.00		"	"	"	"	"	"	
Cadmium	ND	0.0500		"	"	"	"	"	"	
Chromium	ND	0.100		"	"	"	"	"	"	
Mercury	ND	0.00250		"	"	5K01062	11/01/05	11/02/05	EPA 7470A	
Lead	ND	0.100		"	"	SJ28013	10/28/05	10/28/05	EPA 6010B	
Selenium	ND	0.100		"	"	"	"	"	"	

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:25
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**Conventional Chemistry Parameters by APHA/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B-12-S (B5J0465-01) Soil Sampled: 10/21/05 07:55 Received: 10/21/05 15:00									
Ammonia-Nitrogen	ND JS	6.44	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-12-M (B5J0465-02) Soil Sampled: 10/21/05 08:00 Received: 10/21/05 15:00									
Ammonia-Nitrogen	138 J	6.89	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-12-D (B5J0465-03) Soil Sampled: 10/21/05 08:05 Received: 10/21/05 15:00									
Ammonia-Nitrogen	243 J	6.92	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-13-S (B5J0465-04) Soil Sampled: 10/21/05 08:30 Received: 10/21/05 15:00									
Ammonia-Nitrogen	142 J	6.10	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-13-D (B5J0465-05) Soil Sampled: 10/21/05 08:35 Received: 10/21/05 15:00									
Ammonia-Nitrogen	309 J	6.02	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-14-S (B5J0465-06) Soil Sampled: 10/21/05 08:45 Received: 10/21/05 15:00									
Ammonia-Nitrogen	129 J	6.17	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-14-D (B5J0465-07) Soil Sampled: 10/21/05 08:50 Received: 10/21/05 15:00									
Ammonia-Nitrogen	325 J	6.31	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-15-S (B5J0465-08) Soil Sampled: 10/21/05 09:00 Received: 10/21/05 15:00									
Ammonia-Nitrogen	216 J	6.37	mg/kg as N dry	1	5J31069	10/31/05	11/01/05	EPA 350.3	
B-15-D (B5J0465-09) Soil Sampled: 10/21/05 09:05 Received: 10/21/05 15:00									
Ammonia-Nitrogen	334	4.70	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	

11-15-05

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

**Conventional Chemistry Parameters by APHA/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit	Units						
B-18-S (B5J0465-10) Soil Sampled: 10/21/05 09:20 Received: 10/21/05 15:00									
Ammonia-Nitrogen	ND	6.28	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
B-17-S (B5J0465-11) Soil Sampled: 10/21/05 09:35 Received: 10/21/05 15:00									
Ammonia-Nitrogen	242	5.39	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
B-17-M (B5J0465-12) Soil Sampled: 10/21/05 09:40 Received: 10/21/05 15:00									
Ammonia-Nitrogen	288	3.73	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
B-17-D (B5J0465-13) Soil Sampled: 10/21/05 09:45 Received: 10/21/05 15:00									
Ammonia-Nitrogen	339	4.98	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
B-16-S (B5J0465-14) Soil Sampled: 10/21/05 10:05 Received: 10/21/05 15:00									
Ammonia-Nitrogen	84.4	3.35	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
B-16-M (B5J0465-15) Soil Sampled: 10/21/05 10:10 Received: 10/21/05 15:00									
Ammonia-Nitrogen	174	4.13	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
B-16-D (B5J0465-16) Soil Sampled: 10/21/05 10:15 Received: 10/21/05 15:00									
Ammonia-Nitrogen	252	4.52	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
B-21-S (B5J0465-17) Soil Sampled: 10/21/05 10:30 Received: 10/21/05 15:00									
Ammonia-Nitrogen	322	3.56	mg/kg as N dry	1	5K02065	11/02/05	11/02/05	EPA 350.3	
COMP-6 (B5J0465-18) Soil Sampled: 10/21/05 12:55 Received: 10/21/05 15:00									
Cyanide (total)	ND	0.657	mg/kg dry	1	5J28056	10/28/05	10/28/05	EPA 9010B Mod	
pH	9.25 J		pH Units	"	5J25058	10/25/05	10/25/05	EPA 9045C	
Sulfide	ND	27.2	mg/kg dry	"	5J25060	10/25/05	10/25/05	EPA 9030B	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

Conventional Chemistry Parameters by APHA/EPA Methods
North Creek Analytical - Bothell

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
COMP-7 (BSJ0465-19) Soil Sampled: 10/21/05 13:00 Received: 10/21/05 15:00									
Cyanide (total)	ND	0.604	mg/kg dry	1	5J28056	10/28/05	10/28/05	EPA 9010B Mod	
pH	9.08		pH Units	"	5J25058	10/25/05	10/25/05	EPA 9045C	
Sulfide	28.0	24.1	mg/kg dry	"	5J25060	10/25/05	10/25/05	EPA 9030B	

Handwritten: 11-15-05

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Anions by EPA Method 300.0
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-12-S (B5J0465-01) Soil Sampled: 10/21/05 07:55 Received: 10/21/05 15:00									
Chloride	211	27.6	mg/kg dry	5	5K01038	10/31/05	11/03/05	EPA 300.0	
B-12-M (B5J0465-02) Soil Sampled: 10/21/05 08:00 Received: 10/21/05 15:00									
Chloride	3860	555	mg/kg dry	100	5K01038	10/31/05	11/03/05	EPA 300.0	
B-12-D (B5J0465-03) Soil Sampled: 10/21/05 08:05 Received: 10/21/05 15:00									
Chloride	101000	10900	mg/kg dry	2000	5K01038	10/31/05	11/04/05	EPA 300.0	
B-13-S (B5J0465-04) Soil Sampled: 10/21/05 08:30 Received: 10/21/05 15:00									
Chloride	36900	4920	mg/kg dry	1000	5K01038	10/31/05	11/04/05	EPA 300.0	
B-13-D (B5J0465-05) Soil Sampled: 10/21/05 08:35 Received: 10/21/05 15:00									
Chloride	106000	24900	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-14-S (B5J0465-06) Soil Sampled: 10/21/05 08:45 Received: 10/21/05 15:00									
Chloride	157000	25700	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-14-D (B5J0465-07) Soil Sampled: 10/21/05 08:50 Received: 10/21/05 15:00									
Chloride	107000	25400	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-15-S (B5J0465-08) Soil Sampled: 10/21/05 09:00 Received: 10/21/05 15:00									
Chloride	139000	23800	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-15-D (B5J0465-09) Soil Sampled: 10/21/05 09:05 Received: 10/21/05 15:00									
Chloride	167000	25000	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	

North Creek Analytical - Bothell

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:25
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Anions by EPA Method 300.0
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-18-S (B5J0465-10) Soil Sampled: 10/21/05 09:20 Received: 10/21/05 15:00									
Chloride	86.8	11.1	mg/kg dry	2	5K01038	10/31/05	11/03/05	EPA 300.0	
B-17-S (B5J0465-11) Soil Sampled: 10/21/05 09:35 Received: 10/21/05 15:00									
Chloride	167000	24100	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-17-M (B5J0465-12) Soil Sampled: 10/21/05 09:40 Received: 10/21/05 15:00									
Chloride	213000	23300	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-17-D (B5J0465-13) Soil Sampled: 10/21/05 09:45 Received: 10/21/05 15:00									
Chloride	136000	25300	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-16-S (B5J0465-14) Soil Sampled: 10/21/05 10:05 Received: 10/21/05 15:00									
Chloride	196000	23800	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-16-M (B5J0465-15) Soil Sampled: 10/21/05 10:10 Received: 10/21/05 15:00									
Chloride	259000	22800	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-16-D (B5J0465-16) Soil Sampled: 10/21/05 10:15 Received: 10/21/05 15:00									
Chloride	163000	22700	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	
B-21-S (B5J0465-17) Soil Sampled: 10/21/05 10:30 Received: 10/21/05 15:00									
Chloride	206000	24400	mg/kg dry	5000	5K01038	10/31/05	11/03/05	EPA 300.0	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

**Physical Parameters by APHA/ASTM/EPA Methods
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
B-12-S (B5J0465-01) Soil Sampled: 10/21/05 07:55 Received: 10/21/05 15:00									
Dry Weight	72.0	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-12-M (B5J0465-02) Soil Sampled: 10/21/05 08:00 Received: 10/21/05 15:00									
Dry Weight	71.4	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-12-D (B5J0465-03) Soil Sampled: 10/21/05 08:05 Received: 10/21/05 15:00									
Dry Weight	71.9	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-13-S (B5J0465-04) Soil Sampled: 10/21/05 08:30 Received: 10/21/05 15:00									
Dry Weight	78.6	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-13-D (B5J0465-05) Soil Sampled: 10/21/05 08:35 Received: 10/21/05 15:00									
Dry Weight	77.9	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-14-S (B5J0465-06) Soil Sampled: 10/21/05 08:45 Received: 10/21/05 15:00									
Dry Weight	76.1	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-14-D (B5J0465-07) Soil Sampled: 10/21/05 08:50 Received: 10/21/05 15:00									
Dry Weight	76.1	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-15-S (B5J0465-08) Soil Sampled: 10/21/05 09:00 Received: 10/21/05 15:00									
Dry Weight	77.2	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	
B-15-D (B5J0465-09) Soil Sampled: 10/21/05 09:05 Received: 10/21/05 15:00									
Dry Weight	79.1	1.00	%	1	5J31083	10/31/05	11/02/05	BSOPSPL003R08	

North Creek Analytical - Bothell

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-18-S (B5J0465-10) Soil Sampled: 10/21/05 09:20 Received: 10/21/05 15:00									
Dry Weight	71.0	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
B-17-S (B5J0465-11) Soil Sampled: 10/21/05 09:35 Received: 10/21/05 15:00									
Dry Weight	82.2	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
B-17-M (B5J0465-12) Soil Sampled: 10/21/05 09:40 Received: 10/21/05 15:00									
Dry Weight	82.7	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
B-17-D (B5J0465-13) Soil Sampled: 10/21/05 09:45 Received: 10/21/05 15:00									
Dry Weight	78.8	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
B-16-S (B5J0465-14) Soil Sampled: 10/21/05 10:05 Received: 10/21/05 15:00									
Dry Weight	82.9	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
B-16-M (B5J0465-15) Soil Sampled: 10/21/05 10:10 Received: 10/21/05 15:00									
Dry Weight	85.0	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
B-16-D (B5J0465-16) Soil Sampled: 10/21/05 10:15 Received: 10/21/05 15:00									
Dry Weight	86.8	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
B-21-S (B5J0465-17) Soil Sampled: 10/21/05 10:30 Received: 10/21/05 15:00									
Dry Weight	80.5	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	
COMP-6 (B5J0465-18) Soil Sampled: 10/21/05 12:55 Received: 10/21/05 15:00									
Dry Weight	73.2	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSPLO03R08	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

COMP-7 (BSJ0465-19) Soil Sampled: 10/21/05 13:00 Received: 10/21/05 15:00

Dry Weight	81.1	1.00	%	1	5J31084	10/31/05	11/02/05	BSOPSP003R08		
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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maralco Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:25
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Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Spokane

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
COMP-6 (B5J0465-18) Soil Sampled: 10/21/05 12:55 Received: 10/21/05 15:00									
Flashpoint	ND	20.0	°C	1	5100254	10/31/05	11/01/05	EPA 1010	F-01
COMP-7 (B5J0465-19) Soil Sampled: 10/21/05 13:00 Received: 10/21/05 15:00									
Flashpoint	ND	20.0	°C	1	5100254	10/31/05	11/01/05	EPA 1010	F-01

North Creek Analytical - Bothell

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5J26068: Prepared 10/26/05 Using EPA 3050B										
Blank (5J26068-BLK1)										
Copper	ND	0.500	mg/kg							
Nickel	ND	0.500	"							
Zinc	ND	5.00	"							
LCS (5J26068-BS1)										
Copper	38.6	0.500	mg/kg	40.0		96.5	80-120			
Nickel	39.6	0.500	"	40.0		99.0	80-120			
Zinc	39.9	5.00	"	40.0		99.8	80-120			
LCS Dup (5J26068-BSD1)										
Copper	38.8	0.500	mg/kg	40.0		97.0	80-120	0.517	20	
Nickel	40.0	0.500	"	40.0		100	80-120	1.01	20	
Zinc	40.2	5.00	"	40.0		100	80-120	0.749	20	
Matrix Spike (5J26068-MS1) Source: B5J0426-09										
Nickel	81.8	0.586	mg/kg dry	46.9	47.5	73.1	56-135			
Matrix Spike (5J26068-MS2) Source: B5J0426-09RE1										
Copper	1170	5.86	mg/kg dry	46.9	1270	-213	33-156			Q-03
Zinc	902	58.6	"	46.9	931	-61.8	20-160			Q-01
Matrix Spike Dup (5J26068-MSD1) Source: B5J0426-09										
Nickel	98.5	0.586	mg/kg dry	46.9	47.5	109	56-135	18.5	30	
Matrix Spike Dup (5J26068-MSD2) Source: B5J0426-09RE1										
Copper	1260	5.86	mg/kg dry	46.9	1270	-21.3	33-156	7.41	30	Q-03
Zinc	961	58.6	"	46.9	931	64.0	20-160	6.33	30	

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

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 11/14/05 17:25

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26068: Prepared 10/26/05 Using EPA 3050B

Post Spike (5J26068-PS1)

Source: B5J0426-09

Nickel	0.174		ug/ml	0.100	0.0811	92.9	75-125			
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Post Spike (5J26068-PS2)

Source: B5J0426-09RE1

Copper	2.25		ug/ml	0.101	2.16	89.1	75-125			
Zinc	1.68		"	0.100	1.59	90.0	75-125			

Batch 5J26069: Prepared 10/26/05 Using EPA 3050B

Blank (5J26069-BLK1)

Copper	ND	0.500	mg/kg							
Nickel	ND	0.500	"							
Zinc	ND	5.00	"							

LCS (5J26069-BS1)

Copper	38.4	0.500	mg/kg	40.0		96.0	80-120			
Nickel	39.7	0.500	"	40.0		99.2	80-120			
Zinc	39.6	5.00	"	40.0		99.0	80-120			

LCS Dup (5J26069-BSD1)

Copper	39.8	0.500	mg/kg	40.0		99.5	80-120	3.58	20	
Nickel	41.2	0.500	"	40.0		103	80-120	3.71	20	
Zinc	39.9	5.00	"	40.0		99.8	80-120	0.755	20	

Matrix Spike (5J26069-MS1)

Source: B5J0465-10

Nickel	115	0.704	mg/kg dry	56.3	56.6	104	56-135			
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Matrix Spike (5J26069-MS2)

Source: B5J0515-01

Copper	67.4	0.504	mg/kg dry	40.3	24.8	106	33-156			
Nickel	66.9	0.504	"	40.3	23.7	107	56-135			
Zinc	114	5.04	"	40.3	67.3	116	20-160			

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J26069: Prepared 10/26/05 Using EPA 3050B

Matrix Spike (5J26069-MS3)

Source: BSJ0465-10

Copper	2120	7.04	mg/kg dry	56.3	2000	213	33-156			Q-03
Zinc	1960	70.4	"	56.3	1460	888	20-160			Q-03

Matrix Spike Dup (5J26069-MSD1)

Source: BSJ0465-10

Nickel	115	0.704	mg/kg dry	56.3	56.6	104	56-135	0.00	30	
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Matrix Spike Dup (5J26069-MSD2)

Source: BSJ0515-01

Copper	71.2	0.504	mg/kg dry	40.3	24.8	115	33-156	5.48	30	
Nickel	68.1	0.504	"	40.3	23.7	110	56-135	1.78	30	
Zinc	119	5.04	"	40.3	67.3	128	20-160	4.29	30	

Matrix Spike Dup (5J26069-MSD3)

Source: BSJ0465-10

Copper	2100	7.04	mg/kg dry	56.3	2000	178	33-156	0.948	30	Q-03
Zinc	1900	70.4	"	56.3	1460	782	20-160	3.11	30	Q-03

Post Spike (5J26069-PS1)

Source: BSJ0465-10

Nickel	0.177		ug/ml	0.100	0.0804	96.6	75-125			
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Post Spike (5J26069-PS2)

Source: BSJ0465-10

Copper	3.11		ug/ml	0.101	2.84	267	75-125			Q-03
Zinc	2.51		"	0.100	2.07	440	75-125			Q-03

Batch 5K04052: Prepared 11/04/05 Using EPA 3050B

Blank (5K04052-BLK1)

Potassium	39.4	14.9	mg/kg							
Sodium	ND	14.9	"							

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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5K04052: Prepared 11/04/05 Using EPA 3050B

LCS (5K04052-BS1)

Potassium	584	15.0	mg/kg	500		117	80-120			
Sodium	278	15.0	"	250		111	80-120			

LCS Dup (5K04052-BSD1)

Potassium	589	15.0	mg/kg	500		118	80-120	0.853	20	
Sodium	289	15.0	"	250		116	80-120	3.88	20	

Matrix Spike (5K04052-MS1)

Source: B5J0465-10

Potassium	19200	2070	mg/kg dry	690	13700	797	70-130			Q-03
Sodium	8800	20.7	"	345	6950	536	70-130			Q-03

Matrix Spike Dup (5K04052-MSD1)

Source: B5J0465-10

Potassium	17600	2130	mg/kg dry	711	13700	549	70-130	8.70	30	Q-03
Sodium	7940	21.3	"	356	6950	278	70-130	10.3	30	Q-03

Post Spike (5K04052-PS1)

Source: B5J0465-10

Potassium	199		ug/ml	10.0	195	40.0	75-125			Q-03
Sodium	102		"	5.00	98.8	64.0	75-125			Q-03

Batch 5K08027: Prepared 11/08/05 Using EPA 3050B

Blank (5K08027-BLK1)

Potassium	ND	15.0	mg/kg							
Sodium	ND	15.0	"							

LCS (5K08027-BS1)

Potassium	560	15.0	mg/kg	500		112	80-120			
Sodium	273	15.0	"	250		109	80-120			

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5K08027: Prepared 11/08/05 Using EPA 3050B										
LCS Dup (5K08027-BSD1)										
Potassium	544	15.0	mg/kg	500		109	80-120	2.90	20	
Sodium	268	15.0	"	250		107	80-120	1.85	20	
Matrix Spike (5K08027-MS1) Source: B5J0426-01RE1										
Potassium	122000	1730	mg/kg dry	575	142000	-3480	70-130			Q-03
Sodium	105000	1730	"	288	108000	-1040	70-130			Q-03
Matrix Spike Dup (5K08027-MSD1) Source: B5J0426-01RE1										
Potassium	153000	1760	mg/kg dry	587	142000	1870	70-130	22.5	30	Q-03
Sodium	116000	1760	"	293	108000	2730	70-130	9.95	30	Q-03
Post Spike (5K08027-PS1) Source: B5J0426-01RE1										
Potassium	2350		ug/ml	10.0	2420	-700	75-125			Q-03
Sodium	1860		"	5.00	1840	400	75-125			Q-03

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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Notes
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Batch 5J28013: Prepared 10/28/05 Using EPA 3010A

Blank (5J28013-BLK1)

Silver	ND	0.0500	mg/l							
Arsenic	ND	0.100	"							
Barium	ND	1.00	"							
Cadmium	ND	0.0500	"							
Chromium	ND	0.100	"							
Lead	ND	0.100	"							
Selenium	ND	0.100	"							

LCS (5J28013-BS1)

Silver	0.940	0.0500	mg/l	1.00		94.0	80-120			
Arsenic	4.78	0.100	"	5.00		95.6	80-120			
Barium	4.58	1.00	"	5.00		91.6	80-120			
Cadmium	4.77	0.0500	"	5.00		95.4	80-120			
Chromium	4.70	0.100	"	5.00		94.0	80-120			
Lead	4.82	0.100	"	5.00		96.4	80-120			
Selenium	4.72	0.100	"	5.00		94.4	80-120			

LCS Dup (5J28013-BSD1)

Silver	0.958	0.0500	mg/l	1.00		95.8	80-120	1.90	35	
Arsenic	4.89	0.100	"	5.00		97.8	80-120	2.28	20	
Barium	4.65	1.00	"	5.00		93.0	80-120	1.52	20	
Cadmium	4.88	0.0500	"	5.00		97.6	80-120	2.28	20	
Chromium	4.80	0.100	"	5.00		96.0	80-120	2.11	20	
Lead	4.97	0.100	"	5.00		99.4	80-120	3.06	20	
Selenium	4.86	0.100	"	5.00		97.2	80-120	2.92	20	

Matrix Spike (5J28013-MS1)

Source: B5J0465-10

Silver	0.963	0.0500	mg/l	1.00	ND	96.3	75-125			
Arsenic	4.92	0.100	"	5.00	ND	98.4	80-120			
Barium	4.66	1.00	"	5.00	0.0219	92.8	80-120			
Cadmium	4.86	0.0500	"	5.00	ND	97.2	80-120			
Chromium	4.79	0.100	"	5.00	ND	95.8	80-120			
Lead	4.96	0.100	"	5.00	ND	99.2	80-120			
Selenium	4.87	0.100	"	5.00	ND	97.4	80-120			

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J28013: Prepared 10/28/05 Using EPA 3010A

Matrix Spike Dup (5J28013-MSD1)

Source: B5J0465-10

Silver	0.949	0.0500	mg/l	1.00	ND	94.9	75-125	1.46	35	
Arsenic	4.86	0.100	"	5.00	ND	97.2	80-120	1.23	20	
Barium	4.60	1.00	"	5.00	0.0219	91.6	80-120	1.30	20	
Cadmium	4.79	0.0500	"	5.00	ND	95.8	80-120	1.45	20	
Chromium	4.71	0.100	"	5.00	ND	94.2	80-120	1.68	20	
Lead	4.90	0.100	"	5.00	ND	98.0	80-120	1.22	20	
Selenium	4.86	0.100	"	5.00	ND	97.2	80-120	0.206	20	

Batch 5K01062: Prepared 11/01/05 Using EPA 7470A

Blank (5K01062-BLK1)

Mercury	ND	0.00100	mg/l							
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LCS (5K01062-BS1)

Mercury	0.00504	0.00100	mg/l	0.00500		101	80-120			
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LCS Dup (5K01062-BSD1)

Mercury	0.00515	0.00100	mg/l	0.00500		103	80-120	2.16	20	
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Matrix Spike (5K01062-MS1)

Source: B5J0465-01

Mercury	0.0124	0.00250	mg/l	0.0125	ND	99.2	75-125			
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Matrix Spike Dup (5K01062-MSD1)

Source: B5J0465-01

Mercury	0.0120	0.00250	mg/l	0.0125	ND	96.0	75-125	3.28	20	
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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J25058: Prepared 10/25/05 Using General Preparation

Duplicate (5J25058-DUP1)				Source: B5J0465-18						
pH	9.28		pH Units		9.25			0.324	10	

Duplicate (5J25058-DUP2)				Source: B5J0465-19						
pH	9.10		pH Units		9.08			0.220	10	

Batch 5J25060: Prepared 10/25/05 Using General Preparation

Blank (5J25060-BLK1)										
Sulfide	ND	19.7	mg/kg							

LCS (5J25060-BS1)										
Sulfide	104	19.9	mg/kg	125		83.2	75-125			

LCS Dup (5J25060-BSD1)										
Sulfide	109	20.0	mg/kg	125		87.2	75-125	4.69	25	

Duplicate (5J25060-DUP1)				Source: B5J0465-19						
Sulfide	39.8	24.6	mg/kg dry		28.0			34.8	30	Q-14

Matrix Spike (5J25060-MS1)				Source: B5J0465-19						
Sulfide	175	24.3	mg/kg dry	153	28.0	96.1	20-120			

Batch 5J28056: Prepared 10/28/05 Using General Preparation

Blank (5J28056-BLK1)										
Cyanide (total)	ND	0.500	mg/kg							

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Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J28056: Prepared 10/28/05 Using General Preparation

Blank (5J28056-BLK2)

Cyanide (total) ND 0.500 mg/kg

LCS (5J28056-BS1)

Cyanide (total) 5.10 0.500 mg/kg 4.97 103 85-115

LCS (5J28056-BS2)

Cyanide (total) 4.95 0.500 mg/kg 4.97 99.6 85-115

LCS Dup (5J28056-BSD1)

Cyanide (total) 5.00 0.500 mg/kg 4.97 101 85-115 1.98 30

Duplicate (5J28056-DUP1)

Source: B5J0381-15

Cyanide (total) 1.16 0.683 mg/kg dry 1.16 0.00 46

Matrix Spike (5J28056-MS1)

Source: B5J0381-15

Cyanide (total) 7.30 0.664 mg/kg dry 6.60 1.16 93.0 27-138

Batch 5J31069: Prepared 10/31/05 Using General Preparation

Blank (5J31069-BLK1)

Ammonia-Nitrogen ND 5.00 mg/kg as N

LCS (5J31069-BS1)

Ammonia-Nitrogen 236 5.00 mg/kg as N 250 94.4 75-125

LCS Dup (5J31069-BSD1)

Ammonia-Nitrogen 239 5.00 mg/kg as N 250 95.6 75-125 1.26 25

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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5J31069: Prepared 10/31/05 Using General Preparation

Matrix Spike (5J31069-MS1) Source: B5J0426-09
 Ammonia-Nitrogen 354 5.57 mg/kg as N dry 278 104 89.9 59-127

Matrix Spike Dup (5J31069-MSD1) Source: B5J0426-09
 Ammonia-Nitrogen 317 4.82 mg/kg as N dry 241 104 88.4 59-127 11.0 30

Batch 5K02065: Prepared 11/02/05 Using General Preparation

Blank (5K02065-BLK1)
 Ammonia-Nitrogen ND 0.100 mg/kg as N

LCS (5K02065-BS1)
 Ammonia-Nitrogen 4.83 0.100 mg/kg as N 5.00 96.6 75-125

LCS Dup (5K02065-BSD1)
 Ammonia-Nitrogen 4.85 0.100 mg/kg as N 5.00 97.0 75-125 0.413 25

Matrix Spike (5K02065-MS1) Source: B5J0465-10
 Ammonia-Nitrogen 251 4.96 mg/kg as N dry 248 3.62 99.8 59-127

Matrix Spike Dup (5K02065-MSD1) Source: B5J0465-10
 Ammonia-Nitrogen 266 5.68 mg/kg as N dry 284 3.62 92.4 59-127 5.80 30

North Creek Analytical - Bothell

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Jeff Gerdes

Jeff Gerdes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network



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URS Corporation
 1501 4th Ave, Suite 1400
 Seattle, WA/USA 98101-1616

Project: Maralco
 Project Number: 33757742
 Project Manager: Vance Atkins

Reported:
 11/14/05 17:25

Anions by EPA Method 300.0 - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch SK01038: Prepared 10/31/05 Using General Preparation										
Blank (SK01038-BLK1)										
Chloride	ND	4.00	mg/kg							
LCS (SK01038-BS1)										
Chloride	20.9	4.00	mg/kg	20.0		104	90-110			
LCS Dup (SK01038-BSD1)										
Chloride	19.8	4.00	mg/kg	20.0		99.0	90-110	5.41	10	
Matrix Spike (SK01038-MS1) Source: BSJ0465-10										
Chloride	115	27.4	mg/kg dry	27.4	86.8	103	62-157			
Matrix Spike Dup (SK01038-MSD1) Source: BSJ0465-10										
Chloride	130	10.6	mg/kg dry	26.4	86.8	164	62-157	12.2	25	Q-15

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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616	Project: Maraico Project Number: 33757742 Project Manager: Vance Atkins	Reported: 11/14/05 17:25
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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5J31083: Prepared 10/31/05 Using Dry Weight										
Blank (5J31083-BLK1)										
Dry Weight	99.8	1.00	%							
Batch 5J31084: Prepared 10/31/05 Using Dry Weight										
Blank (5J31084-BLK1)										
Dry Weight	100	1.00	%							

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URS Corporation
1501 4th Ave, Suite 1400
Seattle, WA/USA 98101-1616

Project: Maralco
Project Number: 33757742
Project Manager: Vance Atkins

Reported:
11/14/05 17:25

Notes and Definitions

- F-01 No flash detected up to 100 °C
- Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- Q-03 The percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
- Q-14 Visual examination indicates the RPD and/or matrix spike recovery is outside the control limit due to a non-homogeneous sample matrix.
- Q-15 Analyses are not controlled on matrix spike RPD and/or percent recoveries when the sample concentration is significantly higher than the spike level.
- Q-18 The method blank contains analyte at a concentration above the MRL. This concentration is less than 5% of the sample result, which is negligible according to method criteria.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

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Jeff Gerdes, Project Manager

North Creek Analytical, Inc.
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Page 35 of 35



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 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-363-9200 FAX 363-9210

CHAIN OF CUSTODY REPORT

Work Order #: **B5J0465**

NCA CLIENT: URS CORP.			INVOICE TO: URS										TURNAROUND REQUEST In Business Days *				
REPORT TO: Vance Atkins			P.O. NUMBER: 3375 7742 0001										Organic & Inorganic Analyses				
ADDRESS: 1501 4th Ave, Suite 1400 Seattle WA 98101													<input checked="" type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 Petroleum Hydrocarbon Analyses: <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 OTHER Specify: _____ <small>* Turnaround Request has been rounded up to the next full day.</small>				
PHONE: 206-438-2012 FAX: 206-438-2699			PRESERVATIVE										MATRIX (W, S, O)				
PROJECT NAME: Marnico			REQUESTED ANALYSES										# OF CONT.				
PROJECT NUMBER: 3375 7742													LOCATION / COMMENTS				
SAMPLED BY: M. Klemm													NCA WO ID				
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOTAL METALS (CLODD)	TCLP (C1314)	ARSENIC (300.3)	CHLORIDE (300.0)	FISH BIOASSAY	PAH	BIOMASS	PH	(9015C)	IDENTIFICATION (C1330)	TOTAL CHLORINE (9010)	TOTAL SULFIDE (9020)	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 B-12-S	10-21-05 0755	X	X	X	X									SOIL	4	0-5	01
2 B-12-M	0800	X	X	X	X										4	5-10	02
3 B-12-D	0805	X	X	X	X										4	10-14	03
4 B-13-S	0830	X	X	X	X										4	0-5	04
5 B-13-D	0835	X	X	X	X										4	5-10	05
6 B-14-S	0845	X	X	X	X										4	0-5	06
7 B-14-D	0850	X	X	X	X										4	5-10	07
8 B-15-S	0900	X	X	X	X										4	0-4	08
9 B-15-D	0905	X	X	X	X										4	4-8	09
10 B-18-S	0920	X	X	X	X										5	0-6 (MUSND)	10
RELEASED BY: [Signature]			DATE:			RECEIVED BY: [Signature]			DATE:								
PRINT NAME: Matt Hornberger			FIRM: URS			PRINT NAME: Vance Atkins			FIRM: URS			TIME: 1400					
RELEASED BY: [Signature]			DATE: 10/21/05			RECEIVED BY: Colette Weaver			DATE: 10/21/05								
PRINT NAME: Vance Atkins			FIRM: URS			PRINT NAME: Colette Weaver			FIRM: NCA			TIME: 1500					
ADDITIONAL REMARKS: TOTAL METALS: Cu, Ni, Zn, Na, K ; hold bioassays pending results of other analyses ; contact Vance Atkins w/ questions 206-619-5957													TEMP:		PAGE 1 OF 2		

SUBCONTRACT ORDER
North Creek Analytical - Bothell
B5J0465

55J0156

SENDING LABORATORY:

North Creek Analytical - Bothell
11720 North Creek Parkway North, Suite 400
Bothell, WA 98011-8223
Phone: (425) 420-9200
Fax: (425) 420-9210
Project Manager: Jeff Gerdes

RECEIVING LABORATORY:

North Creek Analytical - Spokane
11922 E 1st Ave
Spokane, WA/USA 99206
Phone: 509-924-9200
Fax: 509-924-9290

Analysis	Due	Expires	Laboratory ID	Comments
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Sample ID: B5J0465-18	Soil	Sampled: 10/21/05 12:55	[REDACTED]	
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Ignitability-1010	11/03/05 17:00	11/18/05 12:55		
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Containers Supplied:

4 oz. jar (A)

Sample ID: B5J0465-19	Soil	Sampled: 10/21/05 13:00	[REDACTED]	
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Ignitability-1010	11/03/05 17:00	11/18/05 13:00		
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Containers Supplied:

4 oz. jar (A)

Colette Weaver 10-24-05
Released By Date

[Signature] 10/25/05
Received By Date

Released By Date Received By *2.5°C* Date