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FLUOR

Memorandum

M8141-SLF-06-263

To: S. J. Trent A0-21 Date: September 21, 2006

From: S. L. Fitzgerald, Manager
WSCF Analytical Chemistry

cc: w/Attachments

T. F. Dale	S3-30
H. K. Meznarich	S3-30
P. D. Mix	S3-30
J. E. Trechter	S3-30
D. D. Wright	S3-30
File/LB	

Subject: FINAL RESULTS FOR 100-KR-4 GROUNDWATER TREATABILITY TEST SAMPLES – SAMPLE DELIVERY GROUP WSCF20061042 – SAF NUMBER F05-016

Reference:
(1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002

(2) HNF-SD-CD-QAPP-017, Rev. 7, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains a narrative (Attachment 1) for sample delivery group WSCF20061042, the analytical results (Attachment 2), and the sample receipt information (Attachment 3).

SLF/cmj

Attachments 3

RECEIVED
AUG 2 0 2007
EDMC

SEP 2006
RECEIVED

M8141-SLF-06-263

ATTACHMENT 1

NARRATIVE

Consisting of 4 pages
Including cover page

Sample Delivery Group	**WSCF20061042**
Sample Matrix	**WATER**
Sample Visual	**N/A**
SAF Number	**F05-016**
Data Deliverable	**Summary Report**

Introduction

Five (5) 100-KR-4 Groundwater Treatability Test samples (B1KK92, B1KK93, B1KK94, B1KK95 and B1KK96) were received at the WSCF Laboratory on September 6, 2006. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

It should be noted that the attached chain of custody was stamped "iced", initialed and dated by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, page 22, for a complete listing of approved analytical methods.

Inorganic Comments

Alkalinity – The hold time for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with each delivery group per GRP Letter of Instruction. See page 12 for QC details.

All QC controls are within the established limits.

Anions - Hold time requirements were met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GRP Letter of Instruction. See pages 13-14 for QC details.

All QC controls are within the established limits.

Hexavalent Chromium - The hold time for this analysis was met. A Blank, Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See page 15 QC for details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate recoveries were below the established laboratory limit. Matrix interferences in the sample required dilution which is reflected in the elevated detection limit. Sample also exhibited characteristics of being chemically reduced. Sample result for B1KK94 was UX flagged.

All other QC controls are within the established limits.

ICP-AES Metals – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 16-17 for QC details. Analytical Notes:

- Preparation Date: 14-sep-2006.

- Calcium, Magnesium and Sodium – insufficient spike concentrations. Sample concentrations were greater than four times the spike concentration.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See page 18 for QC details. Analytical Notes:

- Preparation Date: 18-sep-2006.

- Lead – analyte found in preparation blank was evaluated and sample result for B1KK92 was C flagged.

All other QC controls are within the established limits.

Total Organic Carbon – The hold time for this analysis was met. A Blank, Method Spike, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See page 19 for QC details. Analytical Note:

- Sample results for B1KK93, B1KK94, B1KK95 and B1KK96 were D-flagged; the analyte was identified at a secondary dilution factor.

All QC controls are within the established limits.

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Pauline D. Mix
WSCF Client Services

Abbreviations

Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

M8141-SLF-06-263

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 19 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: William H Baird WW Baird 9/21/2006

Client Services: P.D. Mix P.D. Mix 9/21/2006

All results are reported on an "as received" basis unless otherwise noted in the comment section.

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20061042
Report Date: 21-sep-2006

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-016: F05-016

Group #: WSCF20061042

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic														
W060003027	B1KK92	TRENT	18540-29-9	Hexavalent Chromium	WATER	LA-265-403	U	< 2.00e-03	mg/L	1.00	2.0e-03	09/06/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	ALKALINITY	Total Alkalinity as mg/L CaCO3	WATER	LA-531-411		96.0	mg/L	1.00	1.0	09/14/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	TOC	Total organic carbon	WATER	LA-344-406		4.07	mg/L	1.00	0.30	09/07/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	16887-00-6	Chloride	WATER	LA-533-410		11.9	mg/L	20.00	0.52	09/06/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	NO2-N	Nitrogen in Nitrite	WATER	LA-533-410	U	< 0.110	mg/L	5.00	0.11	09/06/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	24959-67-9	Bromide	WATER	LA-533-410	U	< 0.600	mg/L	5.00	0.60	09/06/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	NO3-N	Nitrogen in Nitrate	WATER	LA-533-410		4.42	mg/L	20.00	0.88	09/06/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	14808-79-8	Sulfate	WATER	LA-533-410		104	mg/L	20.00	3.4	09/06/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7439-89-6	Iron	WATER	LA-505-411		2.23e+03	ug/L	10.00	3.3e+02	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7439-95-4	Magnesium	WATER	LA-505-411		1.18e+04	ug/L	10.00	1.5e+02	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7440-09-7	Potassium	WATER	LA-505-411		7.36e+03	ug/L	10.00	2.2e+03	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7440-23-5	Sodium	WATER	LA-505-411		1.23e+04	ug/L	10.00	1.2e+03	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7440-70-2	Calcium	WATER	LA-505-411		6.65e+04	ug/L	10.00	3.1e+02	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7439-96-5	Manganese	WATER	LA-505-412		201	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7440-47-3	Chromium	WATER	LA-505-412		66.7	ug/L	1.00	0.500	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7439-92-1	Lead	WATER	LA-505-412	C	1.81	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003027	B1KK92	TRENT	7440-38-2	Arsenic	WATER	LA-505-412		3.06	ug/L	1.00	0.400	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	18540-29-9	Hexavalent Chromium	WATER	LA-265-403	U	< 2.00e-03	mg/L	1.00	2.0e-03	09/06/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	ALKALINITY	Total Alkalinity as mg/L CaCO3	WATER	LA-531-411		38.0	mg/L	1.00	1.0	09/14/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	TOC	Total organic carbon	WATER	LA-344-406	D	14.4	mg/L	20.00	6.0	09/07/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	16887-00-6	Chloride	WATER	LA-533-410		12.0	mg/L	20.00	0.52	09/06/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	NO2-N	Nitrogen in Nitrite	WATER	LA-533-410	U	< 0.220	mg/L	10.00	0.22	09/06/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	24959-67-9	Bromide	WATER	LA-533-410	U	< 1.20	mg/L	10.00	1.2	09/06/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	NO3-N	Nitrogen in Nitrate	WATER	LA-533-410	U	< 0.440	mg/L	10.00	0.44	09/06/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	14808-79-8	Sulfate	WATER	LA-533-410		193	mg/L	20.00	3.4	09/06/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7439-89-6	Iron	WATER	LA-505-411	U	< 330	ug/L	10.00	3.3e+02	09/19/06	09/06/06	09/06/06

MDL=Minimum Detection Limit
RQ=Result Qualifier

C - The Analyte was found in the Associated Blank.
U - Analyzed for but not detected above limiting criteria.
D - Analyte was identified at a secondary dilution factor
X - Other flags and notes described in the comments/narrative.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-016: F05-016

Group #: WSCF20061042

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W060003028	B1KK93	TRENT	7439-95-4	Magnesium	WATER	LA-505-411		1.73e+03	ug/L	10.00	1.5e+02	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7440-09-7	Potassium	WATER	LA-505-411		2.94e+03	ug/L	10.00	2.2e+03	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7440-23-5	Sodium	WATER	LA-505-411		7.72e+03	ug/L	10.00	1.2e+03	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7440-70-2	Calcium	WATER	LA-505-411		9.83e+04	ug/L	10.00	3.1e+02	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7439-96-5	Manganese	WATER	LA-505-412		23.1	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7440-47-3	Chromium	WATER	LA-505-412	U	< 0.500	ug/L	1.00	0.500	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7439-92-1	Lead	WATER	LA-505-412	U	< 0.100	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003028	B1KK93	TRENT	7440-38-2	Arsenic	WATER	LA-505-412		17.7	ug/L	1.00	0.400	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	18540-29-9	Hexavalent Chromium	WATER	LA-265-403	UX	< 9.30e-03	mg/L	4.65	9.3e-03	09/06/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	ALKALINITY	Total Alkalinity as mg/L CaCO3	WATER	LA-531-411		21.0	mg/L	1.00	1.0	09/14/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	TOC	Total organic carbon	WATER	LA-344-406	D	8.37	mg/L	20.00	6.0	09/07/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	16887-00-6	Chloride	WATER	LA-533-410		24.8	mg/L	20.00	0.52	09/06/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	NO2-N	Nitrogen in Nitrite	WATER	LA-533-410	U	< 0.220	mg/L	10.00	0.22	09/06/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	24959-67-9	Bromide	WATER	LA-533-410	U	< 1.20	mg/L	10.00	1.2	09/06/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	NO3-N	Nitrogen in Nitrate	WATER	LA-533-410	U	< 0.440	mg/L	10.00	0.44	09/06/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	14808-79-8	Sulfate	WATER	LA-533-410		179	mg/L	20.00	3.4	09/06/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7439-89-6	Iron	WATER	LA-505-411	U	< 330	ug/L	10.00	3.3e+02	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7439-95-4	Magnesium	WATER	LA-505-411		1.64e+03	ug/L	10.00	1.5e+02	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7440-09-7	Potassium	WATER	LA-505-411		4.39e+03	ug/L	10.00	2.2e+03	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7440-23-5	Sodium	WATER	LA-505-411		1.06e+04	ug/L	10.00	1.2e+03	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7440-70-2	Calcium	WATER	LA-505-411		9.18e+04	ug/L	10.00	3.1e+02	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7439-96-5	Manganese	WATER	LA-505-412		12.7	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7440-47-3	Chromium	WATER	LA-505-412	U	< 0.500	ug/L	1.00	0.500	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7439-92-1	Lead	WATER	LA-505-412	U	< 0.100	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003029	B1KK94	TRENT	7440-38-2	Arsenic	WATER	LA-505-412		13.0	ug/L	1.00	0.400	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	18540-29-9	Hexavalent Chromium	WATER	LA-265-403	U	< 2.00e-03	mg/L	1.00	2.0e-03	09/06/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	ALKALINITY	Total Alkalinity as mg/L CaCO3	WATER	LA-531-411		38.0	mg/L	1.00	1.0	09/14/06	09/06/06	09/06/06

MDL = Minimum Detection Limit
RQ = Result Qualifier

C - The Analyte was found in the Associated Blank.
U - Analyzed for but not detected above limiting criteria.
D - Analyte was identified at a secondary dilution factor
X - Other flags and notes described in the comments/narrative.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-016: F05-016

Group #: WSCF20061042

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W060003030	B1KK95	TRENT	TOC	Total organic carbon	WATER	LA-344-406	D	16.2	mg/L	20.00	6.0	09/07/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	16887-00-6	Chloride	WATER	LA-533-410		13.5	mg/L	20.00	0.52	09/06/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	NO2-N	Nitrogen in Nitrite	WATER	LA-533-410	U	< 0.220	mg/L	10.00	0.22	09/06/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	24959-67-9	Bromide	WATER	LA-533-410	U	< 1.20	mg/L	10.00	1.2	09/06/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	NO3-N	Nitrogen in Nitrate	WATER	LA-533-410	U	< 0.440	mg/L	10.00	0.44	09/06/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	14808-79-8	Sulfate	WATER	LA-533-410		194	mg/L	20.00	3.4	09/06/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7439-89-6	Iron	WATER	LA-505-411	U	< 330	ug/L	10.00	3.3e+02	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7439-95-4	Magnesium	WATER	LA-505-411		3.50e+03	ug/L	10.00	1.5e+02	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7440-09-7	Potassium	WATER	LA-505-411		5.90e+03	ug/L	10.00	2.2e+03	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7440-23-5	Sodium	WATER	LA-505-411		1.07e+04	ug/L	10.00	1.2e+03	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7440-70-2	Calcium	WATER	LA-505-411		1.03e+05	ug/L	10.00	3.1e+02	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7439-96-5	Manganese	WATER	LA-505-412		60.4	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7440-47-3	Chromium	WATER	LA-505-412	U	< 0.500	ug/L	1.00	0.500	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7439-92-1	Lead	WATER	LA-505-412	U	< 0.100	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003030	B1KK95	TRENT	7440-38-2	Arsenic	WATER	LA-505-412		15.6	ug/L	1.00	0.400	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	18540-29-9	Hexavalent Chromium	WATER	LA-265-403	U	< 2.00e-03	mg/L	1.00	2.0e-03	09/06/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	ALKALINITY	Total Alkalinity as mg/L CaCO3	WATER	LA-531-411		150	mg/L	1.00	1.0	09/14/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	TOC	Total organic carbon	WATER	LA-344-406	D	19.0	mg/L	10.00	3.0	09/07/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	16887-00-6	Chloride	WATER	LA-533-410		10.1	mg/L	20.00	0.52	09/06/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	NO2-N	Nitrogen in Nitrite	WATER	LA-533-410	U	< 0.220	mg/L	10.00	0.22	09/06/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	24959-67-9	Bromide	WATER	LA-533-410	U	< 1.20	mg/L	10.00	1.2	09/06/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	NO3-N	Nitrogen in Nitrate	WATER	LA-533-410	U	< 0.440	mg/L	10.00	0.44	09/06/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	14808-79-8	Sulfate	WATER	LA-533-410		206	mg/L	20.00	3.4	09/06/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7439-89-6	Iron	WATER	LA-505-411	U	< 330	ug/L	10.00	3.3e+02	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7439-95-4	Magnesium	WATER	LA-505-411		1.58e+04	ug/L	10.00	1.5e+02	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7440-09-7	Potassium	WATER	LA-505-411		5.90e+03	ug/L	10.00	2.2e+03	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7440-23-5	Sodium	WATER	LA-505-411		1.14e+04	ug/L	10.00	1.2e+03	09/19/06	09/06/06	09/06/06

MDL=Minimum Detection Limit
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C - The Analyte was found in the Associated Blank.
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D - Analyte was identified at a secondary dilution factor
X - Other flags and notes described in the comments/narrative.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-016: F05-016

Group #: WSCF20061042

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W060003031	B1KK96	TRENT	7440-70-2	Calcium	WATER	LA-505-411		1.12e+05	ug/L	10.00	3.1e+02	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7439-96-5	Manganese	WATER	LA-505-412		557	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7440-47-3	Chromium	WATER	LA-505-412	U	< 0.500	ug/L	1.00	0.500	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7439-92-1	Lead	WATER	LA-505-412	U	< 0.100	ug/L	1.00	0.100	09/19/06	09/06/06	09/06/06
W060003031	B1KK96	TRENT	7440-38-2	Arsenic	WATER	LA-505-412		4.94	ug/L	1.00	0.400	09/19/06	09/06/06	09/06/06

MDL=Minimum Detection Limit
RQ=Result Qualifier

C - The Analyte was found in the Associated Blank.
U - Analyzed for but not detected above limiting criteria.
D - Analyte was identified at a secondary dilution factor
X - Other flags and notes described in the comments/narrative.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

SAF Number: F05-016
Sample Date: 09/06/06
Receive Date:09/06/06

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W060003027									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	96	2.062	RPD	09/14/06	0.000	20.000	
BATCH QC									
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	36.8	101.099	% Recov	09/14/06	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: Anions by Ion Chromatography

SAF Number: F05-016
Sample Date: 09/06/06
Receive Date:09/06/06

Lab ID: W060003027

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Bromide	24959-67-9	<0.6	n/a	RPD	09/06/06	0.000	20.000	U
DUP	Chloride	16887-00-6	12.8009	6.912	RPD	09/06/06	0.000	20.000	
DUP	Nitrogen in Nitrite	NO2-N	<0.11	n/a	RPD	09/06/06	0.000	20.000	U
DUP	Nitrogen in Nitrate	NO3-N	4.4822	1.477	RPD	09/06/06	0.000	20.000	
DUP	Sulfate	14808-79-8	101.6334	2.494	RPD	09/06/06	0.000	20.000	
MS	Bromide	24959-67-9	1.97606	99.801	% Recov	09/06/06	75.000	125.000	
MS	Chloride	16887-00-6	0.988275	101.884	% Recov	09/06/06	75.000	125.000	
MS	Nitrogen in Nitrite	NO2-N	0.49378	100.158	% Recov	09/06/06	75.000	125.000	
MS	Nitrogen in Nitrate	NO3-N	0.45133	103.754	% Recov	09/06/06	75.000	125.000	
MS	Sulfate	14808-79-8	1.918585	96.898	% Recov	09/06/06	75.000	125.000	
MSD	Bromide	24959-67-9	1.95246	98.609	% Recov	09/06/06	75.000	125.000	
MSD	Chloride	16887-00-6	1.043195	107.546	% Recov	09/06/06	75.000	125.000	
MSD	Nitrogen in Nitrite	NO2-N	0.51908	105.290	% Recov	09/06/06	75.000	125.000	
MSD	Nitrogen in Nitrate	NO3-N	0.459045	105.528	% Recov	09/06/06	75.000	125.000	
MSD	Sulfate	14808-79-8	1.92256	97.099	% Recov	09/06/06	75.000	125.000	

BATCH QC

BLANK	Bromide	24959-67-9	<0.12	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Bromide	24959-67-9	<0.12	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Bromide	24959-67-9	<12.24	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Chloride	16887-00-6	<2.652	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Chloride	16887-00-6	<2.6e-2	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Chloride	16887-00-6	<2.6e-2	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<2.244	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<2.2e-2	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<2.2e-2	n/a	mg/L	09/06/06	0.000	300.000	U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: Anions by Ion Chromatography

SAF Number: F05-016
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Nitrogen in Nitrate	NO3-N	<4.488	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Nitrogen in Nitrate	NO3-N	<4.4e-2	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Nitrogen in Nitrate	NO3-N	<4.4e-2	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<0.17	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<0.17	n/a	mg/L	09/06/06	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<17.34	n/a	mg/L	09/06/06	0.000	300.000	U
LCS	Bromide	24959-67-9	393.7845	98.446	% Recov	09/06/06	80.000	120.000	
LCS	Bromide	24959-67-9	409.7572	102.439	% Recov	09/06/06	80.000	120.000	
LCS	Chloride	16887-00-6	207.9535	106.099	% Recov	09/06/06	80.000	120.000	
LCS	Chloride	16887-00-6	210.5207	107.409	% Recov	09/06/06	80.000	120.000	
LCS	Nitrogen in Nitrite	NO2-N	101.2343	101.641	% Recov	09/06/06	80.000	120.000	
LCS	Nitrogen in Nitrite	NO2-N	98.701	99.097	% Recov	09/06/06	80.000	120.000	
LCS	Nitrogen in Nitrate	NO3-N	92.2486	104.947	% Recov	09/06/06	80.000	120.000	
LCS	Nitrogen in Nitrate	NO3-N	92.9328	105.726	% Recov	09/06/06	80.000	120.000	
LCS	Sulfate	14808-79-8	383.7794	95.945	% Recov	09/06/06	80.000	120.000	
LCS	Sulfate	14808-79-8	402.2415	100.560	% Recov	09/06/06	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: Hexavalent chromium

SAF Number: F05-016
Sample Date: 09/06/06
Receive Date:09/06/06

Lab ID: W060003029

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Hexavalent chromium	18540-29-9	0.0027	0.000	RPD	09/06/06	0.000	15.000	
MS	Hexavalent chromium	18540-29-9	0.0221	41.856	% Recov	09/06/06	85.000	115.000	*
MSD	Hexavalent chromium	18540-29-9	0.0234	44.318	% Recov	09/06/06	85.000	115.000	*
SPK-RPD	Hexavalent chromium	18540-29-9	44.318	5.714	RPD	09/06/06	0.000	20.000	

BATCH QC

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Hexavalent chromium	18540-29-9	0	0.000	mg/L	09/06/06	0.000	2.000	
LCS	Hexavalent chromium	18540-29-9	0.0513	103.219	% Recov	09/06/06	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

SAF Number: F05-016
Sample Date: 09/06/06
Receive Date:09/06/06

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W060003027									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Calcium	7440-70-2	NA	n/a	% Recov	09/19/06	75.000	125.000	
MS	Iron	7439-89-6	936	93.600	% Recov	09/19/06	75.000	125.000	
MS	Potassium	7440-09-7	9878	98.780	% Recov	09/19/06	75.000	125.000	
MS	Magnesium	7439-95-4	NA	n/a	% Recov	09/19/06	75.000	125.000	
MS	Sodium	7440-23-5	NA	n/a	% Recov	09/19/06	75.000	125.000	
MSD	Calcium	7440-70-2	NA	n/a	% Recov	09/19/06	75.000	125.000	
MSD	Iron	7439-89-6	913	91.300	% Recov	09/19/06	75.000	125.000	
MSD	Potassium	7440-09-7	8858	88.580	% Recov	09/19/06	75.000	125.000	
MSD	Magnesium	7439-95-4	NA	n/a	% Recov	09/19/06	75.000	125.000	
MSD	Sodium	7440-23-5	NA	n/a	% Recov	09/19/06	75.000	125.000	
SPK-RPD	Calcium	7440-70-2		n/a	RPD	09/19/06	0.000	20.000	
SPK-RPD	Iron	7439-89-6	91.300	2.488	RPD	09/19/06	0.000	20.000	
SPK-RPD	Potassium	7440-09-7	88.580	10.888	RPD	09/19/06	0.000	20.000	
SPK-RPD	Magnesium	7439-95-4		n/a	RPD	09/19/06	0.000	20.000	
SPK-RPD	Sodium	7440-23-5		n/a	RPD	09/19/06	0.000	20.000	
BATCH QC									
BLANK	Calcium	7440-70-2	<31	n/a	ug/L	09/19/06			U
BLANK	Iron	7439-89-6	<33	n/a	ug/L	09/19/06			U
BLANK	Potassium	7440-09-7	<220	n/a	ug/L	09/19/06			U
BLANK	Magnesium	7439-95-4	<15	n/a	ug/L	09/19/06			U
BLANK	Sodium	7440-23-5	<115	n/a	ug/L	09/19/06			U
LCS	Calcium	7440-70-2	1028	102.800	% Recov	09/19/06	80.000	120.000	
LCS	Iron	7439-89-6	993.9	99.390	% Recov	09/19/06	80.000	120.000	
LCS	Potassium	7440-09-7	10470	104.700	% Recov	09/19/06	80.000	120.000	
LCS	Magnesium	7439-95-4	974	97.400	% Recov	09/19/06	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

SAF Number: F05-016
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Sodium	7440-23-5	982.4	98.240	% Recov	09/19/06	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: ICP-2008 MS All possible metal

SAF Number: F05-016
Sample Date: 09/06/06
Receive Date:09/06/06

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W060003027									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Arsenic	7440-38-2	39.34	98.350	% Recov	09/19/06	70.000	130.000	
MS	Chromium	7440-47-3	37.75	94.375	% Recov	09/19/06	70.000	130.000	
MS	Manganese	7439-96-5	35.6	89.000	% Recov	09/19/06	70.000	130.000	
MS	Lead	7439-92-1	39.782	99.455	% Recov	09/19/06	70.000	130.000	
MSD	Arsenic	7440-38-2	39.25	98.125	% Recov	09/19/06	70.000	130.000	
MSD	Chromium	7440-47-3	35.45	88.625	% Recov	09/19/06	70.000	130.000	
MSD	Manganese	7439-96-5	42.9	107.250	% Recov	09/19/06	70.000	130.000	
MSD	Lead	7439-92-1	41.132	102.830	% Recov	09/19/06	70.000	130.000	
SPK-RPD	Arsenic	7440-38-2	98.125	0.229	RPD	09/19/06	0.000	20.000	
SPK-RPD	Chromium	7440-47-3	88.625	6.284	RPD	09/19/06	0.000	20.000	
SPK-RPD	Manganese	7439-96-5	107.250	18.599	RPD	09/19/06	0.000	20.000	
SPK-RPD	Lead	7439-92-1	102.830	3.337	RPD	09/19/06	0.000	20.000	
BATCH QC									
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L	09/19/06			U
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L	09/19/06			U
BLANK	Manganese	7439-96-5	<0.1	n/a	ug/L	09/19/06			U
BLANK	Lead	7439-92-1	0.6253	0.625	ug/L	09/19/06			
LCS	Arsenic	7440-38-2	38.61	96.525	% Recov	09/19/06	85.000	115.000	
LCS	Chromium	7440-47-3	40.12	100.300	% Recov	09/19/06	85.000	115.000	
LCS	Manganese	7439-96-5	40.13	100.325	% Recov	09/19/06	85.000	115.000	
LCS	Lead	7439-92-1	40.43	101.075	% Recov	09/19/06	85.000	115.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20061042
Matrix: WATER
Test: Total Organic Carbon

SAF Number: F05-016
Sample Date: 09/06/06
Receive Date:09/06/06

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W060003028									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Total Organic Carbon	TOC	1.113	111.300	% Recov	09/07/06	75.000	125.000	
MSD	Total Organic Carbon	TOC	1.093	109.300	% Recov	09/07/06	75.000	125.000	
SPK-RPD	Total Organic Carbon	TOC	109.300	1.813	RPD	09/07/06	0.000	20.000	
BATCH QC									
BLANK	Total Organic Carbon	TOC	0.04636	0.046	mg/L	09/07/06	0.000	300.000	
METHSPIKE	Total Organic Carbon	TOC	1.057	105.700	% Recov	09/07/06	80.000	120.000	
SPK-RSD	Total Organic Carbon	TOC	0.3813	0.381	% RSD	09/07/06	0.000	20.000	

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F05-016

Group #: WSCF20061042

Sample #	Client ID		Lab Area	Test	Comment
			VALGROUP		ICP-MS: Lead prep blank above the MDL. Affects sample W06--3027 only C-flag on this sample
W060003029	B1KK94	TRENT	VALTEST	Hexavalent chromium	ICP-AES: Magnesium, sodium, and calcium sample results beyond effective spike range (spike results marked "NA"). Hexavalent Chromium: Sample exhibits characteristics of being chemically reducing and some with matrix interference that required dilution (reflected in the elevated detection limits). UX flag

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample
VALTEST - Test Validation
LOGTEST - Login for Tests
TESTDATA - Test Data Entry

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention:
Project Number :

Group #: 20061042

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units

RQ=Result Qualifier

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WSCF
METHOD REFERENCES REPORT

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-265-403	LA-265-403: Hexavalent Chromium analysis by Spectrophotometer	
	EPA SW-846 7196A	HEXAVALENT CHROMIUM
	HEIS 7196_CR6	Hexavalent Chromium
LA-344-406	LA-344-406: TOTAL ORGANIC CARBON (TOC) BASED ON SW-846	
	EPA SW-846 9060	TOTAL ORGANIC CARBON
	HEIS 9060_TOC	Total Organic Carbon
LA-505-411	LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE	
	EPA SW-846 6010B	INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY
	HEIS 6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmision Spectrometry
LA-505-412	LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY	
	EPA-600/R-94-111 200.8	DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
	HEIS 200.8_METALS_ICPMS	Inductively Coupled Plasma - Mass Spectrometry
LA-531-411	LA-531-411: ALKALINITY (TITRIMETRIC)	
	EPA-600/4-79-020 310.1	ALKALINITY
	HEIS 310.1_ALKALINITY	Alkalinity
LA-533-410	LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY	
	EPA-600/R-94-111 300.0	DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY
	HEIS 300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at \\ap006\aspdocs\WSCF\Sample Mgmt\ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

w13qlog v1 21-sep-2006 09:28:08

W13q Worklist/Batch/QC Report for Group# WSCF20061042

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
29606	2	29971	33882	BLANK		Anions by Ion Chromatography
29606	10	29971	33882	BLANK		Anions by Ion Chromatography
29606	14	29971	33882	BLANK		Anions by Ion Chromatography
29606	3	29971	33882	LCS		Anions by Ion Chromatography
29606	9	29971	33882	LCS		Anions by Ion Chromatography
29606	5	29971	33882	DUP	W060003027	Anions by Ion Chromatography
29606	6	29971	33882	MS	W060003027	Anions by Ion Chromatography
29606	7	29971	33882	MSD	W060003027	Anions by Ion Chromatography
29606	4	29971	33882	SAMPLE	W060003027	Anions by Ion Chromatography
29606	8	29971	33882	SAMPLE	W060003028	Anions by Ion Chromatography
29606	11	29971	33882	SAMPLE	W060003029	Anions by Ion Chromatography
29606	12	29971	33882	SAMPLE	W060003030	Anions by Ion Chromatography
29606	13	29971	33882	SAMPLE	W060003031	Anions by Ion Chromatography
29634	2	29998	33907	BLANK		Hexavalent chromium
29634	3	29998	33907	LCS		Hexavalent chromium
29634	4	29998	33907	SAMPLE	W060003027	Hexavalent chromium
29634	5	29998	33907	SAMPLE	W060003028	Hexavalent chromium
29634	7	29998	33907	DUP	W060003029	Hexavalent chromium
29634	8	29998	33907	MS	W060003029	Hexavalent chromium
29634	9	29998	33907	MSD	W060003029	Hexavalent chromium
29634	6	29998	33907	SAMPLE	W060003029	Hexavalent chromium
29634	9	29998	33907	SPK-RPD	W060003029	Hexavalent chromium
29634	10	29998	33907	SAMPLE	W060003030	Hexavalent chromium
29634	11	29998	33907	SAMPLE	W060003031	Hexavalent chromium
29679	1	30043	33956	BLANK		Total Organic Carbon
29679	2	30043	33956	METHSPIKE		Total Organic Carbon
29679	3	30043	33956	SPK-RSD		Total Organic Carbon
29679	7	30043	33956	SAMPLE	W060003027	Total Organic Carbon
29679	4	30043	33956	MS	W060003028	Total Organic Carbon
29679	5	30043	33956	MSD	W060003028	Total Organic Carbon
29679	8	30043	33956	SAMPLE	W060003028	Total Organic Carbon
29679	5	30043	33956	SPK-RPD	W060003028	Total Organic Carbon
29679	9	30043	33956	SAMPLE	W060003029	Total Organic Carbon
29679	10	30043	33956	SAMPLE	W060003030	Total Organic Carbon
29679	11	30043	33956	SAMPLE	W060003031	Total Organic Carbon
			33996	LCS		Total Alkalinity as mg/L CaCO3
			33996	DUP	W060003027	Total Alkalinity as mg/L CaCO3
			33996	SAMPLE	W060003027	Total Alkalinity as mg/L CaCO3
			33996	SAMPLE	W060003028	Total Alkalinity as mg/L CaCO3
			33996	SAMPLE	W060003029	Total Alkalinity as mg/L CaCO3
			33996	SAMPLE	W060003030	Total Alkalinity as mg/L CaCO3
			33996	SAMPLE	W060003031	Total Alkalinity as mg/L CaCO3
29722	1	30086	34041	BLANK		ICP-2008 MS All possible metal
29722	2	30086	34041	LCS		ICP-2008 MS All possible metal
29722	4	30086	34041	MS	W060003027	ICP-2008 MS All possible metal
29722	5	30086	34041	MSD	W060003027	ICP-2008 MS All possible metal
29722	3	30086	34041	SAMPLE	W060003027	ICP-2008 MS All possible metal
29722	5	30086	34041	SPK-RPD	W060003027	ICP-2008 MS All possible metal
29722	6	30086	34041	SAMPLE	W060003028	ICP-2008 MS All possible metal
29722	7	30086	34041	SAMPLE	W060003029	ICP-2008 MS All possible metal

29722	8	30086	34041	SAMPLE	W060003030	ICP-2008 MS All possible metal
29722	9	30086	34041	SAMPLE	W060003031	ICP-2008 MS All possible metal
29670	1	30034	34055	BLANK		ICP Metals Analysis, Grd H20 P
29670	2	30034	34055	LCS		ICP Metals Analysis, Grd H20 P
29670	4	30034	34055	MS	W060003027	ICP Metals Analysis, Grd H20 P
29670	5	30034	34055	MSD	W060003027	ICP Metals Analysis, Grd H20 P
29670	3	30034	34055	SAMPLE	W060003027	ICP Metals Analysis, Grd H20 P
29670	5	30034	34055	SPK-RPD	W060003027	ICP Metals Analysis, Grd H20 P
29670	6	30034	34055	SAMPLE	W060003028	ICP Metals Analysis, Grd H20 P
29670	7	30034	34055	SAMPLE	W060003029	ICP Metals Analysis, Grd H20 P
29670	8	30034	34055	SAMPLE	W060003030	ICP Metals Analysis, Grd H20 P
29670	9	30034	34055	SAMPLE	W060003031	ICP Metals Analysis, Grd H20 P

M8141-SLF-06-263

ATTACHMENT 3

SAMPLE RECEIPT INFORMATION

Consisting of 3 pages
Including cover page

Waste Sampling and Characterization Facility
P.O. BOX 1970 S3-30, Richland, WA 99352
PHONE: (509) 373-7004/FAX: (509) 373-7134

9/21/06
File KB

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 119321/ES10
Group#: 20061042
Project#: F05-016
Proj Mgr: Steve Trent A0-21
Phone: 373-5869

The following samples were received from you on 09/06/06. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Tests Scheduled	Matrix				Sample Date
W060003027	B1KK92	TRENT	Water				09/06/06
		@2008	@GPP6010	@IC-30	ALKALI	CR+6	
		TOC-30					
W060003028	B1KK93	TRENT	Water				09/06/06
		@2008	@GPP6010	@IC-30	ALKALI	CR+6	
		TOC-30					
W060003029	B1KK94	TRENT	Water				09/06/06
		@2008	@GPP6010	@IC-30	ALKALI	CR+6	
		TOC-30					
W060003030	B1KK95	TRENT	Water				09/06/06
		@2008	@GPP6010	@IC-30	ALKALI	CR+6	
		TOC-30					
W060003031	B1KK96	TRENT	Water				09/06/06
		@2008	@GPP6010	@IC-30	ALKALI	CR+6	
		TOC-30					

Test Acronym Description

Test Acronym	Description
@2008	ICP-2008 MS All possible metal
@GPP6010	ICP Metals Analysis, Grd H20 P
@IC-30	Anions by Ion Chromatography
ALKALI	Total Alkalinity as mg/L CaCO3
CR+6	Hexavalent chromium
TOC-30	Total Organic Carbon

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	7C	DATA TURNAROUND
Pope/Pfister/Hughes/Lanman/Wise	PETERSEN, SW	372-9160	TRENT, SJ			
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	☐	**15 Days / 15 Days**
100-KR-4	100-KR-4 Groundwater Treatability Test		F05-016			
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**			
	HNF-N-576-1/N-296-7	119321ES10	Government Vehicle			
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**			
Waste Sampling & Characterization	N/A		N/A			

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C	HCl to pH <2/Cool 4C
TYPE OF CONTAINER	P	P	P	P	aG
NO. OF CONTAINER(S)	1	1	1	1	1
VOLUME	250mL	500mL	125mL	125mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Alkalinity - 310.1;	TOC - 9060;

20061042

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1KK92	W06003027	WATER	9-6-06	0810	✓	✓	✓	✓	✓
B1KK93	28	WATER	9-6-06	0826	✓	✓	✓	✓	✓
B1KK94	29	WATER	9-6-06	0835	✓	✓	✓	✓	✓
B1KK95	30	WATER	9-6-06	0850	✓	✓	✓	✓	✓
B1KK96	31	WATER	9-6-06	0905	✓	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SNUGNES 9-6-06	1000	KBeebe 9/6/06	1000
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** Cr VI holding times MUST BE MET. Sample Management must be contacted immediately if there is a problem.
(1)ICP/MS - 200.8 (TAL) {Chromium, Manganese} ICP/MS - 200.8 (Add-on) {Arsenic, Lead} ICP Metals - 6010B (TAL) {Calcium, Iron, Magnesium, Potassium, Sodium}
(2)IC Anions - 300.0 {Bromide, Chloride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}

ICED
KBS Initial
9/6/06 Date

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME