USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
MH36L9

Lab Name: ALS Laboratory Group Contract: EPW09036

Lab Code: DATAC Case No.: 40755 Mod. Ref. No.: _____ SDG No.: MH36L0

Matrix: Soil Lab Sample ID: 1030771012

% Solids: 20.1 Date Received: 11/03/2010

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13400			P
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium	2310	J		P
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	238000		D	P
7439-92-1	Lead				
7439-95-4	Magnesium	913.	J		P
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium	231.	J	E	P
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium	44.5	J	E	P
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
57-12-5	Cyanide				

2490 U n

J+ n

J+ n

KSA 3/10/11

Color Before: ORANGE Clarity Before: _____ Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
E: The reported value is estimated due to the presence of interference.

USEPA - CLP
1B-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
MH36L9

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Lab Code: DATAC Case No.: 40755 Mod. Ref. No.: _____ SDG No.: MH36L0

Matrix: Soil Lab Sample ID: 1030771012

% Solids: 20.1 Date Received: 11/03/2010

Concentration Units (ug/L, ug or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony	0.44	J	N	MS	5.0 UJ N
7440-38-2	Arsenic	17.7		E	MS	J N
7440-39-3	Barium	21.4	J	*	MS	~~25.0 U~~ 24.9 UJ N
7440-41-7	Beryllium	1.4	J	E	MS	2.5 U N
7440-43-9	Cadmium	0.35	J		MS	2.5 U N
7440-70-2	Calcium					
7440-47-3	Chromium	2.8	J		MS	5.0 U N
7440-48-4	Cobalt	1.5	J	*	MS	2.5 U J N
7440-50-8	Copper	28.1			MS	
7439-89-6	Iron					
7439-92-1	Lead	217.		E	MS	J N
7439-95-4	Magnesium					
7439-96-5	Manganese	336.			MS	
7439-97-6	Mercury					
7440-02-0	Nickel	1.3	J		MS	
7440-09-7	Potassium					
7782-49-2	Selenium	12.4	U	N	MS	12.4 UJ N
7440-22-4	Silver	0.71	J	N	MS	2.5 UJ N
7440-23-5	Sodium					
7440-28-0	Thallium	2.5	U	N	MS	UJ KsA 3/10/11
7440-62-2	Vanadium	41.8			MS	
7440-66-6	Zinc	269.		E	MS	J N KsA 3/10/11
57-12-5	Cyanide					

Color Before: ORANGE Clarity Before: _____ Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
E: The reported value is estimated due to the presence of interference.

REGION VIII
DATA VALIDATION REPORT
INORGANIC

Case No. / TDD No.	Site Name		Operable Unit
C101001 / 1008-13	Upper Animas Mining District		
RPM/OSC Name			
Sabrina Forrest			
Contractor Laboratory	Contract No.	TDF No.	Laboratory DPO/Region
ESAT – TechLaw, Inc.		DG-216 surface water and mine discharge	

Review Assigned Date March 28, 2011
Review Completion Date March 31, 2011

Data Validator Diane Short & Assoc. Review
Report Reviewer Kent Alexander

Station	Client ID	Lab ID	Sample Type
Method 200.7 ICP, 200.8 ICPMS Total and Dissolved (D)			
A68	UASW003	C101101-01	Surface Water
A72	UASW029	C101101-02	Surface Water
CC01F	UASW030	C101101-03	Surface Water
CC01S	UASW024	C101101-04	Surface Water
CC01T	UASW023	C101101-05	Surface Water
CC02A	UASW022	C101101-06	Surface Water
CC02D	UAAD004	C101101-07	Mine Discharge (D)
CC02D	UAAD004	C101101-08	Mine Discharge
CC03C	UAAD003	C101101-09	Mine Discharge (D)
CC03C	UAAD003	C101101-10	Mine Discharge
CC03D	UASW015	C101101-11	Surface Water
CC06	UAAD002	C101101-12	Mine Discharge (D)
CC06	UAAD002	C101101-13	Mine Discharge
CC17	UASW005	C101101-14	Surface Water
CC17 DUP	UASW098	C101101-15	Surface Water
CC18	UASW007	C101101-16	Surface Water
CC19	UAAD001	C101101-17	Mine Discharge (D)
CC19	UAAD001	C101101-18	Mine Discharge

Station	Client ID	Lab ID	Sample Type
CC48	UASW035	C101101-19	Surface Water
CC48 DUP	UASW097	C101101-20	Surface Water
CCOPP-12	UASW016	C101101-21	Surface Water
M34	UASW033	C101101-22	Surface Water
UASW001	UASW001	C101101-23	Surface Water
UASW002	UASW002	C101101-24	Surface Water
UASW004	UASW004	C101101-25	Surface Water
UASW006	UASW006	C101101-26	Surface Water
UASW008	UASW008	C101101-27	Surface Water
UASW009	UASW009	C101101-28	Surface Water
UASW010	UASW010	C101101-29	Surface Water
UASW011	UASW011	C101101-30	Surface Water
UASW012	UASW012	C101101-31	Surface Water
UASW013	UASW013	C101101-32	Surface Water
UASW014	UASW014	C101101-33	Surface Water
UASW017	UASW017	C101101-34	Surface Water
UASW018	UASW018	C101101-35	Surface Water
UASW019	UASW019	C101101-36	Surface Water
UASW019 DUP	UASW099	C101101-37	Surface Water
UASW020	UASW020	C101101-38	Surface Water
UASW021	UASW021	C101101-39	Surface Water
UASW032	UASW032	C101101-40	Surface Water
UASW034	UASW034	C101101-41	Surface Water
UASW036	UASW036	C101101-42	Surface Water
UASW037	UASW037	C101101-43	Surface Water
UASW039	UASW039	C101101-44	Surface Water
UASW040	UASW040	C101101-45	Surface Water
UASW041	UASW041	C101101-46	Surface Water
UASW042	UASW042	C101101-47	Surface Water
UASW043	UASW043	C101101-48	Surface Water
UASW044	UASW044	C101101-49	Surface Water
UASW045	UASW045	C101101-50	Surface Water
UASW046	UASW046	C101101-51	Surface Water
UASW047	UASW047	C101101-52	Surface Water
UASW049	UASW049	C101101-53	Surface Water
UASW050	UASW050	C101101-54	Surface Water
UASW054	UASW054	C101101-55	Surface Water
UASW056	UASW056	C101101-56	Surface Water
UASW058	UASW058	C101101-57	Surface Water
UASW059	UASW059	C101101-58	Surface Water

Station	Client ID	Lab ID	Sample Type
Analysis for Hardness SM 2340B			
CC02D	UAAD004	C101101-07	Mine Discharge
CC03C	UAAD003	C101101-09	Mine Discharge
CC06	UAAD002	C101101-12	Mine Discharge
CC19	UAAD001	C101101-17	Mine Discharge

DATA QUALITY STATEMENT

( ) Data are ACCEPTABLE according to EPA Functional guidelines with no qualifiers (flags) added by the reviewer.
( ) Data are UNACCEPTABLE according to EPA Functional Guidelines.
(X) Data are acceptable with QUALIFICATIONS noted in review.

Telephone/Communication Logs Enclosed? Yes _____ No ___X___

CLP Project Officer Attention Required? Yes _____ No ___X___ If yes, list the items that require attention:

INORGANIC DATA VALIDATION REPORT

REVIEW NARRATIVE SUMMARY

This data package was reviewed according to "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," January 2010.

Raw data were reviewed for completeness and transcription accuracy onto the summary forms. Approximately 10-20% of the results reported in each of the samples, calibrations, and QC analyses were recalculated and verified representing all data packages received for this review. If problems were identified during the recalculation of results, a more thorough calculation check was performed.

The data package, TDF No. DG-216, consisted of 54 total surface water and mine discharge and 4 dissolved mine discharge samples for Total Recoverable Metals and Dissolved Metals by Methods 200.7 ICP and 200.8 by ICPMS. The following table lists the data qualifiers added to the sample analyses. Please see Data Qualifier Definitions, attached to the end of this report.

Station ID	Client ID	Lab ID	Analyte	Result ug/L	EPA Qualifier	DSA Qualifier
A68	UASW003	C101101-01	Silver	0.843	U	UCB.6
A68	UASW003	C101101-01	Molybdenum	3.63	U	UCB1.35
CC01S	UASW024	C101101-04	Beryllium	0.968	J+	JC110.3
CC02D	UAAD004	C101101-07	Molybdenum	1.99	U	UCB1.25
CC02D	UAAD004	C101101-08	Beryllium	4.82	J+	JC110.3
CC03C	UAAD003	C101101-09	Molybdenum	1.54	U	UCB2.5
CC03C	UAAD003	C101101-10	Beryllium	8.40	J+	JC110.3
CC03D	UASW015	C101101-11	Beryllium	6.95	J+	JC110.3
CC06	UAAD002	C101101-13	Beryllium	7.03	J+	JC110.3
CC17	UASW005	C101101-14	Molybdenum	0.535	U	UCB1.35
CC18	UASW007	C101101-16	Beryllium	3.54	J+	JC110.3
CC19	UAAD001	C101101-18	Beryllium	4.18	J+	JC110.3
CC48 DUP	UASW097	C101101-20	Beryllium	1.30	J+	JC110.3
UASW001	UASW001	C101101-23	Beryllium	1.17	J+	JC110.3
UASW002	UASW002	C101101-24	Silver	0.953	U	UCB.6
UASW002	UASW002	C101101-24	Molybdenum	1.04	U	UCB1.35
UASW034	UASW034	C101101-41	Molybdenum	0.670	U	UCB1.35
UASW036	UASW036	C101101-42	Molybdenum	0.900	U	UCB1.35
UASW036	UASW036	C101101-42	Silver	0.891	U	UCB.6
UASW037	UASW037	C101101-43	Molybdenum	0.557	U	UCB1.35

Sample Tracking:
There are Deliverable Submission Forms, but no actual laboratory log-in forms. The integrity of the samples cannot be verified. There are no courier forms or tracking identifications. Sample authentication cannot be verified.

Note that the laboratory forms do not contain dates or times of analysis on the result forms nor on the QC and Calibration Forms. This is not uncommon for CLP-type forms, but it means that the raw data must be spot checked to verify the calibration associations. This was performed only for any outliers listed on the Calibration or QC forms.

No shipping or receiving problems were noted in the narrative. As the client was not notified of custody or integrity issues, no further action is taken.

Blanks:
There are results reported for many of the ICB and CCBs, but none are above the MDLs recorded on the result forms (the ICB/CCB forms only note the PQLs) with the exception of molybdenum reported at 0.25 ug/L for QC set 1011004 and 0.27 ug/l for QC 1011092, 093 and 094; silver at 0.15 ug/l for QC 1011004 and 0.12 ug/L for QC 1011092, 093 and 094 for ICPMS. The highest associated blank is applied to noted data. All ICPMS data are diluted 5 to 10 x for analysis and the Blank must also be multiplied by 5 or 10 in order to apply it to the client data. Data are qualified 'UCB#', where # is the applied blank value. The EPA Qualifier is 'U'.

The laboratory notes that molybdenum was detected in the prep blank at < 2 x PQL. The RL for was raised from 0.20 ug/L to o.40 ug/L. The client will need to determine if the elevated limits meet project criteria. The standard procedure for outlier blanks is to re-analyze the data with an acceptable blank.

Calibration:
One CCV was very slightly high for beryllium at 110.3%. This is noted for Sequence 1011097. The run logs had to be accessed as the Sequences are not noted on the Results forms which have on Batch numbers – and the Calibration forms do not have dates, times or Batch numbers. This is associated with Batch 1011092. Having a consistent association of samples to calibrations on the forms would be useful. Detected data for beryllium in batch 1011092 are qualified 'JC110.3' to indicate a slight high bias. The EPA qualifier is 'J'

Matrix Spike:
The sample results were > 4 x spike for outlier spikes for manganese, magnesium, zinc and calcium. Data are not qualified as the recovery is not statistically valid. The laboratory limits (65-125%) are wider than the CLP limits. The limits noted above are used for qualification. After consideration of the 4x recoveries, no data are qualified.

Detection Limits:
Note that the samples for ICPMS were diluted 5x to 10x. The analytes run by ICPMS were extremely high for lead, cadmium and sometimes copper. The review recommends using the ICP values that are in the raw data for these analytes, although the results were within an acceptable RPD. It is the lower values that are significantly different between the two types of analysis/instrumentation. The client will need to determine if the elevated limits meet project criteria.

Sample ID	Elements	Qualifiers	Reason for Qualification	Review Section
All detected data in QC set 1011092	Beryllium	J+	C110.3	5
All detected data in QC set 1011004	Silver		None, non-detect	7

Sample ID	Elements	Qualifiers	Reason for Qualification	Review Section
All detected data in QC set 1011092, 093, 094	Silver	U	CB.12 (multiplied by dilution factor)	7
All detected data in QC set 1011004	Molybdenum	U	CB.25 (multiplied by dilution factor)	7
All detected data in QC set 1011092, 093, 094	Molybdenum	U	CB.27 (multiplied by dilution factor)	7

There are no rinse blanks, which is acceptable for dedicated sampling equipment.

Field duplicates were identified in the EDD and fully meet field RPD criteria of 20% RPD or ± 1x CRQL for waters.:

UASW005 and 098
UASW035 and 097
UASW019 and 099

1. DELIVERABLES

All deliverables were present as specified in the Statement of Work.
Yes___ No_X__

Comments: There are Deliverable Submission Forms, but no actual laboratory log-in forms. The integrity of the samples cannot be verified. There are no courier forms or tracking identifications. Sample authentication cannot be verified.
Note that the laboratory forms do not contain dates or times of analysis on the result forms nor on the QC and Calibration Forms. This is not uncommon for CLP-type forms, but it means that the raw data must be spot checked to verify the calibration associations. This was performed only for any outliers listed on the Calibration or QC forms.

2. HOLDING TIMES AND PRESERVATION CRITERIA

All technical holding times and preservation criteria were met.
Yes_X__ No____

Comments: The samples were analyzed within specified holding times (180 days for metals and 28 days for mercury). No temperature reading for the cooler was recorded. Per the chain of custody, there were pre-printed fields that noted the sediment samples were (to be) preserved to 4 C and the waters to pH<2, but this cannot be verified as there are no log-in forms.

No shipping or receiving problems were noted in the narrative. As the client was not notified of custody or integrity issues, no further action is taken.

3. INSTRUMENT CALIBRATIONS: STANDARDS AND BLANKS

Initial instrument calibrations were performed according to SOW requirements.
Yes_X__ No____

Comments: None

The instruments were calibrated daily and each time an analysis run was performed.
Yes_X__ No____

Comments: None.

The instruments were calibrated using one blank and the appropriate number of standards.
Yes_X__ No____

Comments: None.

4. SAMPLE ANALYSIS RESULTS

Sample analyses were entered correctly on Form Is.
Yes_X__ No____

Comments: Per the 10% raw data check.

5. INITIAL AND CONTINUING CALIBRATION VERIFICATION

The initial and continuing calibration verification standards (ICV and CCV, respectively) met SOW requirements.
Yes_X__ No____

Comments: None

The calibration verification results were within 90-110% recovery for metals, 85-115% for cyanide, and 80-120% for mercury.
Yes___ No_X___

Comments: One CCV was very slightly high for beryllium at 110.3%. This is noted for Sequence 1011097. The run logs had to be accessed as the Sequences are not noted on the Results forms which have on Batch numbers – and the Calibration forms do not have dates, times or Batch numbers. This is associated with Batch 1011092. Having a consistent association of samples to calibrations on the forms would be useful. Detected data for beryllium in batch 1011092 are qualified 'JC110.3' to indicate a slight high bias. The EPA qualifier is 'J+'.

The continuing calibration standards were run at 10% frequency or every two hours.
Yes_X__ No____

Comments: None.

6. CRQL CHECK STANDARD

ICP Analysis: Standards (CRI) were analyzed at the beginning of each sample analysis run and every 20 analytical samples, immediately preceding the interferences check sample analyses, but not before ICV analysis.
Yes_X__ No___ NA____

Comments: None.

The CRI recoveries were within 70-130% (50 – 150% for ICP: Sb, Pb, Tl; ICP/MS: Co, Mn, Zn) for required elements.
Yes_X__ No____

Comments: None.

7. BLANKS

The initial and continuing calibration blanks (ICB and CCB, respectively) met SOW requirements.
Yes___ No_X_

Comments: There are results reported for many of the ICB and CCBs, but none are above the MDLs recorded on the result forms (the ICB/CCB forms only note the PQLs) with the exception of molybdenum reported at 0.25 ug/L for QC set 1011004 and 0.27 ug/l for QC 1011092, 093 and 094; silver at 0.15 ug/l for QC 1011004 and 0.12 ug/L for QC 1011092, 093 and 094 for ICPMS. The highest associated blank is applied to noted data. All ICPMS data are diluted 5 to 10 x for analysis and the Blank must also be multiplied by 5 or 10 in order to apply it to the client data. Data are qualified 'UCB#', where # is the applied blank value. The EPA Qualifier is 'U'.

The continuing calibration blanks were run at 10% frequency.
Yes_X_ No____

Comments: None.

A laboratory/preparation blank was run at the frequency of one per twenty samples, or per sample delivery group (whichever is more frequent), and for each matrix analyzed.
Yes_X_ No____

Comments: None

All analyzed blanks were free of contamination.
Yes___ No___X

Comments: The laboratory notes that molybdenum was detected in the prep blank at < 2 x PQL. The RL for was raised from 0.20 ug/L to 0.40 ug/L. It was also detected in the calibration blanks. The client will need to determine if the elevated limits meet project criteria. The standard procedure for outlier blanks is to re-analyze the data with an acceptable blank. See calibration blank section.

8. ICP INTERFERENCE CHECK SAMPLE

The ICP interference check sample (ICS) was run at the beginning of each sample analysis run, but not prior to the ICV.
Yes_X_ No____

Comments: None.

Percent recovery of the analytes in the ICS solutions were within the range of 80-120% or the result was within ±2x the CRQL.
Yes_X_ No____

Comments: None.

Sample results for aluminum, calcium, iron, and magnesium were less than the ICSA values.
Yes_X_ No____

Comments: None

No sample results contain potential false positives and false negatives.
Yes_X_ No____

Comments: None.

9. MATRIX SPIKE SAMPLE ANALYSIS

A matrix spike sample was analyzed with every twenty or fewer samples of a similar matrix, or one per sample delivery group (whichever is more frequent).
Yes_X_ No____ NA_____

Comments: Frequency met with client samples.

The percent recoveries (%Rs) were calculated correctly.
Yes_X_ No____ NA_____

Comments: None.

Spike recoveries were within the range of 75-125% (an exception is granted where the sample concentration is four times the spike concentration).
Yes_X_ No____

Comments: The sample results were > 4 x spike for outlier spikes for manganese, magnesium, zinc and calcium. Data are not qualified as the recovery is not statistically valid. The laboratory limits (65-125%) are wider than the CLP limits. The limits noted above are used for qualification. After consideration of the 4x recoveries, no data are qualified.

10. POST DIGEST SPIKE RECOVERY

A post-digest spike was performed for those elements that did not meet the specified criteria (i.e., Pre-digestion/pre-distillation spike recovery falls outside of control limits and sample result is less than four times the spike amount added, exception: Silver, mercury).
Yes_X_ No____ NA_____

Comments: See Section 9.0.

11. DUPLICATE SAMPLE ANALYSIS

Duplicate sample analysis was performed with every twenty or fewer samples of a similar matrix, or one per sample delivery group (whichever is more frequent).
Yes_X_ No____ NA_____

Comments: Duplicates and MS Duplicates are reported.

The RPDs were calculated correctly.
Yes_X_ No____ NA_____

Comments: None.

For sample concentrations greater than five times the CRQL, RPDs were < 20% (limits of <35% apply for soil/sediments/tailings samples).
Yes_X_ No____ NA_____

Comments: None.

For sample concentrations less than five times the CRQL, duplicate analysis results were within the control window of < CRQL (two times CRQL for soils).
Yes_X_ No____ NA_____

Comments: None.

12. ICP-MS

The ICP MS tune met SOW requirements.
Yes_X_ No___ NA___

Comments: The ICP MS instrument was correctly tuned prior to analysis and all tuning criteria were met. The % RSDs were within the 5% limits for the tune. The Ba/Ba++ and Ce/CeO ratios were reported and within limits. The amu (atomic mass units) at half peak width were within limits (in the range of 0.7 – 0.8).

The minimum number of internal standards were added to the analyses and bracketed the target analyte masses.
Yes_X_ No___

Comments: None.

All percent relative intensities were within 60-125%.
Yes_X_ No___

Comments: Per the 10% check of project data.

13. LABORATORY CONTROL SAMPLE

The laboratory control sample (LCS) was prepared and analyzed with every twenty or fewer samples of a similar matrix, or one per sample delivery group (whichever is more frequent).
Yes_X_ No____

All results were within control limits.
Yes_X_ No____

Comments: None

14. ICP-SERIAL DILUTION QC

A serial dilution was performed for ICP analysis with every twenty or fewer samples of a similar matrix, or one per sample delivery group, whichever is more frequent.
Yes_X_ No____

Comments: None.

The serial dilution was without interference problems as defined by the SOW or NFG.
Yes_X_ No____

Comments: The serial dilution %Ds were less than 10% or the original sample result was less than 50> the RL.

15. ANNUAL METHOD DETECTION LIMITS (MDL)

MDLs were provided for all elements on the target analyte list.
Yes_X_ No____

Comments: Last updated February 2010

Reported MDLs met SOW requirements.
Yes_X_ No____

Comments: Note that the samples for ICPMS were diluted 5x to 10x. The analytes run by ICPMS were extremely high for lead, cadmium and sometimes copper. The review recommends using the ICP values that are in the raw data for these analytes, although the results were within an acceptable RPD. It is the lower values that are significantly different between the two types of analysis/instrumentation. The client will need to determine if the elevated limits meet project criteria.

16. INTERELEMENT CORRECTION FACTORS FOR ICP

Interelement corrections for ICP were reported.
Yes_____ No_X_

Comments: Interelement corrections were not included. No action was required.

17. ICP LINEAR RANGES

ICP linear ranges were reported.
Yes_X_ No____

Comments: The linear ranges were updated in February 2010.

18. PREPARATION LOG

Information on the preparation of samples for analysis was reported on laboratory bench sheets as part of the raw data deliverable.
Yes_X_ No____

Comments: None.

19. ANALYSIS RUN LOG

A Form with the required information was filled out for each analysis run in the data package.
Yes_X_ No____

Comments: None.

20. Additional Comments or Problems/Resolutions Not Addressed Above

Yes_X_ No____

Comment:
There are no rinse blanks, which would be appropriate if dedicated equipment was used.
Field duplicates were identified in the EDD and fully meet field RPD criteria of 20% RPD or ± 1 x CRQL for waters.:
UASW005 and 098
UASW035 and 097
UASW019 and 099

INORGANIC DATA QUALITY ASSURANCE REVIEW

Region VIII

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality. Use of additional qualifiers should be carefully considered. Definitions for all qualifiers used should be provided with each report.

GENERAL QUALIFIERS for use with both INORGANIC and ORGANIC DATA

R	-	Reported value is "rejected." The data are unusable. Resampling or reanalysis may be necessary to verify the presence or absence of the compound.
J	-	The associated numerical value is an estimated quantity and is the approximate concentration of the analyte in the sample.
J+	-	The associated numerical value is an estimated quantity but the result may be biased high.
J-	-	The associated numerical value is an estimated quantity but the result may be biased low.
U J	-	The reported quantitation limit is estimated because Quality Control criteria were not met. Element or compound may or may not be present in the sample.
N J	-	Estimated value of a tentatively identified compound. (Identified with a CAS number.) ORGANICS analysis only.
U	-	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

ACRONYMS

CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
CRQL	Contract Required Quantitation Limit
CRI	CRQL standard required for ICP
CV	Cold Vapor
EPA	U.S. Environmental Protection Agency
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICSA	Interference Check Sample (Solution A)
ICSAB	Interference Check Sample (Solution AB)
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
MDL	Method Detection Limit
MS	Matrix Spike
MSD	MS Duplicate
NFG	EPA CLP National Functional Guidelines for Inorganic Data Review
PDS	Post Digestion Spike
QC	Quality Control
RPD	Relative Percent Difference
RPM	Regional Project Manager
RSD	Percent Relative Standard Deviation
SA	Spike Added
SAS	Special Analytical Services
SDG	Sample Delivery Group
SOW	Statement of Work
SR	Sample Result
SSR	Spiked Sample Result

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: A68 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-3 **Matrix:** Surface Water **Lab Number:** C101101-01 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	86.2		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	54300		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	<250	U	ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	3290		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	1940		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	614	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	2460		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	449		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	<10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	<50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	<1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	1.82		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	<1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	0.790	J	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	3.63		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	0.843	J	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	15.4		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	<10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: A72 **Date / Time Sampled:** 10/25/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-12 **Matrix:** Surface Water **Lab Number:** C101101-02 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	1300		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	87500		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	8140		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	7330		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	796		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1620		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	5580		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	94.6		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	0.653	J	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	3.84		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	8.74		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC01F **Date / Time Sampled:** 10/31/10 13:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-55 **Matrix:** Surface Water **Lab Number:** C101101-03 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	69.0		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	46200		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	< 250	U	ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	4060		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	120		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	294	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	1230		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	556		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	30.8	J	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	3.09		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	25.2		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	0.620	J	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC01S **Date / Time Sampled:** 10/31/10 12:04 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-54 **Matrix:** Surface Water **Lab Number:** C101101-04 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	2180		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	72700		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	< 250	U	ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	9760		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	977		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	561	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	1340		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	3230		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	34.7	J	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	0.968	J	ug/L	0.500 J+	5	11/18/2010	SV	1011092
200.8	Cadmium	16.9		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	38.6		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	2.21		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	12.1		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC01T **Date / Time Sampled:** 10/31/10 11:50 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-53 **Matrix:** Surface Water **Lab Number:** C101101-05 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	1580		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	55400		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	< 250	U	ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	7020		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	633		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	482	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	1280		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	2750		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	29.1	J	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	13.6		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	102		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	2.03		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	6.06		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC02A **Date / Time Sampled:** 10/31/10 11:19 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-52 **Matrix:** Surface Water **Lab Number:** C101101-06 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	1430		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	62000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	< 250	U	ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	8310		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	111		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	634	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	1260		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	3080		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	39.4	J	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	10.9		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	22.3		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	2.54		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	9.47		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: CC02D **Date / Time Sampled:** 10/29/10 15:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-38 **Matrix:** Mine Discharge **Lab Number:** C101101-07 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	3300		ug/L	20.0	1	11/23/2010	SW	1011103
200.7	Calcium	211000		ug/L	100	1	11/23/2010	SW	1011103
200.7	Iron	27200		ug/L	100	1	11/23/2010	SW	1011103
200.7	Magnesium	13200		ug/L	100	1	11/23/2010	SW	1011103
200.7	Manganese	29100		ug/L	2.00	1	11/23/2010	SW	1011103
200.7	Potassium	2000		ug/L	250	1	11/23/2010	SW	1011103
200.7	Sodium	6210		ug/L	250	1	11/23/2010	SW	1011103
200.7	Zinc	32700		ug/L	10.0	1	11/23/2010	SW	1011103
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/23/2010	SV	1011104
200.8	Arsenic	2.72	J	ug/L	2.50	5	11/23/2010	SV	1011104
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/23/2010	SV	1011104
200.8	Beryllium	4.49		ug/L	0.500	5	11/23/2010	SV	1011104
200.8	Cadmium	50.9		ug/L	0.500	5	11/23/2010	SV	1011104
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/23/2010	SV	1011104
200.8	Cobalt	22.5		ug/L	0.500	5	11/23/2010	SV	1011104
200.8	Copper	20.9		ug/L	2.50	5	11/23/2010	SV	1011104
200.8	Lead	255		ug/L	0.500	5	11/23/2010	SV	1011104
200.8	Molybdenum	1.99	J	ug/L	0.500	5	11/23/2010	SV	1011104
200.8	Nickel	8.30		ug/L	2.50	5	11/23/2010	SV	1011104
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/23/2010	SV	1011104
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/23/2010	SV	1011104
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/23/2010	SV	1011104
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/23/2010	SV	1011104
2340B	Hardness	582		mg/L	2	1	11/23/2010	SW	1011103

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC02D **Date / Time Sampled:** 10/29/10 15:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-42 **Matrix:** Mine Discharge **Lab Number:** C101101-08 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	3330		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	212000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	31900		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	13200		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	28700		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	2040		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	6280		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	31300		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Barium	< 100	U	ug/L	50.0	10	11/18/2010	SV	1011092
200.8	Beryllium	4.82		ug/L	1.00 5+	10	11/18/2010	SV	1011092
200.8	Cadmium	55.0		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Cobalt	22.3		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Copper	15.3		ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Lead	271		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Nickel	6.74	J	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: CC03C **Date / Time Sampled:** 10/28/10 10:30 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-37 **Matrix:** Mine Discharge **Lab Number:** C101101-09 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	4620		ug/L	20.0	1	11/23/2010	SW	1011103
200.7	Calcium	442000		ug/L	100	1	11/23/2010	SW	1011103
200.7	Iron	101000		ug/L	100	1	11/23/2010	SW	1011103
200.7	Magnesium	28600		ug/L	100	1	11/23/2010	SW	1011103
200.7	Manganese	30500		ug/L	2.00	1	11/23/2010	SW	1011103
200.7	Potassium	1840		ug/L	250	1	11/23/2010	SW	1011103
200.7	Sodium	8530		ug/L	250	1	11/23/2010	SW	1011103
200.7	Zinc	15400		ug/L	10.0	1	11/23/2010	SW	1011103
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Barium	< 100	U	ug/L	50.0	10	11/23/2010	SV	1011104
200.8	Beryllium	6.45		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Cadmium	48.7		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Cobalt	102		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Copper	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Lead	98.7		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Molybdenum	1.54	J	ug/L	1.00 u	10	11/23/2010	SV	1011104
200.8	Nickel	42.6		ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/23/2010	SV	1011104
2340B	Hardness	1220		mg/L	2	1	11/23/2010	SW	1011103

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC03C **Date / Time Sampled:** 10/28/10 10:30 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-41 **Matrix:** Mine Discharge **Lab Number:** C101101-10 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	4680		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	441000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	102000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	28700		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	30700		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1860		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	8730		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	15500		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Barium	< 100	U	ug/L	50.0	10	11/18/2010	SV	1011092
200.8	Beryllium	8.40		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Cadmium	53.1		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Cobalt	97.4		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Copper	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Lead	107		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Nickel	38.2		ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC03D **Date / Time Sampled:** 10/28/10 10:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-46 **Matrix:** Surface Water **Lab Number:** C101101-11 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	3040		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	450000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	95200		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	28900		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	31900		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1850		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	8800		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	15500		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Barium	< 100	U	ug/L	50.0	10	11/18/2010	SV	1011092
200.8	Beryllium	6.95		ug/L	1.00 J+	10	11/18/2010	SV	1011092
200.8	Cadmium	42.2		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Cobalt	95.9		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Copper	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Lead	13.1		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Nickel	38.6		ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: CC06 **Date / Time Sampled:** 10/28/10 13:39 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-36 **Matrix:** Mine Discharge **Lab Number:** C101101-12 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	18300		ug/L	20.0	1	11/23/2010	SW	1011103
200.7	Calcium	395000		ug/L	100	1	11/23/2010	SW	1011103
200.7	Iron	71600		ug/L	100	1	11/23/2010	SW	1011103
200.7	Magnesium	22600		ug/L	100	1	11/23/2010	SW	1011103
200.7	Manganese	27800		ug/L	2.00	1	11/23/2010	SW	1011103
200.7	Potassium	1790		ug/L	250	1	11/23/2010	SW	1011103
200.7	Sodium	5260		ug/L	250	1	11/23/2010	SW	1011103
200.7	Zinc	18600		ug/L	10.0	1	11/23/2010	SW	1011103
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Barium	< 100	U	ug/L	50.0	10	11/23/2010	SV	1011104
200.8	Beryllium	5.98		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Cadmium	53.0		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Cobalt	84.4		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Copper	4210		ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Lead	5.66		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Molybdenum	< 4.00	J,	ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Nickel	35.4		ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/23/2010	SV	1011104
2340B	Hardness	1080		mg/L	2	1	11/23/2010	SW	1011103

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC06 **Date / Time Sampled:** 10/28/10 13:39 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-40 **Matrix:** Mine Discharge **Lab Number:** C101101-13 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	18500		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	398000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	73700		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	22800		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	28000		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1810		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	5350		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	18700		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Barium	< 100	U	ug/L	50.0	10	11/18/2010	SV	1011092
200.8	Beryllium	7.03		ug/L	1.00 J+	10	11/18/2010	SV	1011092
200.8	Cadmium	54.9		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Cobalt	79.1		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Copper	4030		ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Lead	6.82		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Nickel	31.2		ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC17 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No: No Tag Prefix-5 **Matrix:** Surface Water **Lab Number:** C101101-14 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	720		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	162000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	3230		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	8230		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	1840		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	747	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	3470		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	647		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	2.73		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	7.71		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	8.83		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	0.643	J	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	0.535	J	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC17 DUP **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-34 **Matrix:** Surface Water **Lab Number:** C101101-15 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	572		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	163000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	3090		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	8340		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	1860		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	752	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	3520		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	661		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	2.41		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	7.36		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	6.50		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

DS 4/A

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC18 **Date/Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-7 **Matrix:** Surface Water **Lab Number:** C101101-16 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	5730		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	450000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	131000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	31400		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	43000		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1740		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	9500		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	18800		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Barium	< 100	U	ug/L	50.0	10	11/18/2010	SV	1011092
200.8	Beryllium	3.54		ug/L	1.00 J+	10	11/18/2010	SV	1011092
200.8	Cadmium	2.54		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Cobalt	136		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Copper	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Lead	1.52	J	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Nickel	46.9		ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: CC19 **Date / Time Sampled:** 10/27/10 10:05 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-35 **Matrix:** Mine Discharge **Lab Number:** C101101-17 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	4990		ug/L	20.0	1	11/23/2010	SW	1011103
200.7	Calcium	434000		ug/L	100	1	11/23/2010	SW	1011103
200.7	Iron	133000		ug/L	100	1	11/23/2010	SW	1011103
200.7	Magnesium	29900		ug/L	100	1	11/23/2010	SW	1011103
200.7	Manganese	41700		ug/L	2.00	1	11/23/2010	SW	1011103
200.7	Potassium	1680		ug/L	250	1	11/23/2010	SW	1011103
200.7	Sodium	9080		ug/L	250	1	11/23/2010	SW	1011103
200.7	Zinc	18100		ug/L	10.0	1	11/23/2010	SW	1011103
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Barium	< 100	U	ug/L	50.0	10	11/23/2010	SV	1011104
200.8	Beryllium	3.70		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Cadmium	2.02		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Cobalt	136		ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Copper	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Lead	1.12	J	ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Molybdenum	< 4.00	J,	ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Nickel	47.8		ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/23/2010	SV	1011104
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/23/2010	SV	1011104
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/23/2010	SV	1011104
2340B	Hardness	1210		mg/L	2	1	11/23/2010	SW	1011103

"J" Qualifier indicates an estimated value

DS 4/11

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC19 **Date / Time Sampled:** 10/27/10 10:05 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-39 **Matrix:** Mine Discharge **Lab Number:** C101101-18 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	5520		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	457000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	144000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	31600		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	44000		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1790		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	9610		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	19100		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Barium	< 100	U	ug/L	50.0	10	11/18/2010	SV	1011092
200.8	Beryllium	4.18		ug/L	1.00 J+	10	11/18/2010	SV	1011092
200.8	Cadmium	1.97	J	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Cobalt	133		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Copper	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Lead	3.70		ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Nickel	46.3		ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/18/2010	SV	1011092
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/18/2010	SV	1011092
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC48 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-16 **Matrix:** Surface Water **Lab Number:** C101101-19 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7890		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	177000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	12000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	10900		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	4580		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	1840		ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	4550		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	2340		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	1.14		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	6.57		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	22.3		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	147		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	17.4		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 2.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	11.0		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

DS 4/4/11

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CC48 DUP **Date/Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-33 **Matrix:** Surface Water **Lab Number:** C101101-20 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7870		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	175000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	11700		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	10900		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	4810		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1800		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	4580		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	2500		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	1.30		ug/L	0.500 J+	5	11/18/2010	SV	1011092
200.8	Cadmium	6.45		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	21.6		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	135		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	19.0		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	9.52		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010

Certificate of Analysis

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: CCOPP-12 **Date / Time Sampled:** 10/28/10 10:59 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-47 **Matrix:** Surface Water **Lab Number:** C101101-21 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	2480		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	87800		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	210	J	ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	6010		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	3000		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	532	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	2890		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	4640		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	13.7		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	1.83		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	140		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	7.42		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	3.23	J	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: M34 **Date / Time Sampled:** 10/25/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-14 **Matrix:** Surface Water **Lab Number:** C101101-22 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	381		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	57500		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	2800		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	4860		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	327		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	629	J	ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	3300		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	185		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	<10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	<50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	<1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Cadmium	0.926	J	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	3.75		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	1.23		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	<1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	<2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	<10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

DS 4/1c

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW001 **Date/Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-1 **Matrix:** Surface Water **Lab Number:** C101101-23 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7330		ug/L	20.0	1	11/18/2010	SW	1011092
200.7	Calcium	169000		ug/L	100	1	11/18/2010	SW	1011092
200.7	Iron	10800		ug/L	100	1	11/18/2010	SW	1011092
200.7	Magnesium	10400		ug/L	100	1	11/18/2010	SW	1011092
200.7	Manganese	4760		ug/L	2.00	1	11/18/2010	SW	1011092
200.7	Potassium	1700		ug/L	250	1	11/18/2010	SW	1011092
200.7	Sodium	4450		ug/L	250	1	11/18/2010	SW	1011092
200.7	Zinc	2410		ug/L	10.0	1	11/18/2010	SW	1011092
200.8	Antimony	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Arsenic	<10.0	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Barium	<50.0	U	ug/L	25.0	5	11/18/2010	SV	1011092
200.8	Beryllium	1.17		ug/L	0.500 Jt	5	11/18/2010	SV	1011092
200.8	Cadmium	6.19		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Chromium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Cobalt	20.4		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Copper	121		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Lead	17.8		ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Molybdenum	<1.00	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Nickel	8.46		ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Selenium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Silver	<2.50	U	ug/L	0.500	5	11/18/2010	SV	1011092
200.8	Thallium	<5.00	U	ug/L	2.50	5	11/18/2010	SV	1011092
200.8	Vanadium	<10.0	U	ug/L	5.00	5	11/18/2010	SV	1011092

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW002 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-2 **Matrix:** Surface Water **Lab Number:** C101101-24 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7810		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	175000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	11500		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	10900		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	4650		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	1790		ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	4540		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	2370		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	0.826	J	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	6.55		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	23.7		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	148		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	17.8		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	1.04	J	ug/L U	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	10.6		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	0.953	J	ug/L U	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	5.61		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW004 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-4 **Matrix:** Surface Water **Lab Number:** C101101-25 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	5130		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	202000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	16200		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	13100		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	10100		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	933	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	4480		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	5510		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	2.28		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	16.1		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	33.0		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	398		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	25.0		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	14.7		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW006 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-6 **Matrix:** Surface Water **Lab Number:** C101101-26 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	9160		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	258000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	32500		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	18200		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	18500		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	987	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	5630		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	10700		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	3.61		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	30.3		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	59.4		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	796		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	44.8		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	24.8		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW008 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-8 **Matrix:** Surface Water **Lab Number:** C101101-27 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7940		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	238000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	30000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	16100		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	14800		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	926	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	5100		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	9230		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	2.88		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	28.7		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	46.6		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	884		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	19.3		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	20.8		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW009 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-9 **Matrix:** Surface Water **Lab Number:** C101101-28 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7030		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	230000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	31400		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	15600		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	14800		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	899	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	4820		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	9350		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	3.57		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	29.1		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	49.2		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	909		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	14.6		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	328		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW010 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-10 **Matrix:** Surface Water **Lab Number:** C101101-29 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	23500		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	348000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	52900		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	24800		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	23700		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	1430		ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	5140		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	16200		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Barium	< 100	U	ug/L	50.0	10	11/22/2010	SV	1011093
200.8	Beryllium	6.34		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Cadmium	63.7		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Cobalt	83.1		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Copper	4230		ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Lead	5.93		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Nickel	39.3		ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/22/2010	SV	1011093

DS 4/K

Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW011 **Date / Time Sampled:** 10/28/10 14:10 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-43 **Matrix:** Surface Water **Lab Number:** C101101-30 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	18100		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	388000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	66700		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	22300		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	26000		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	1790		ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	5240		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	17100		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Barium	< 100	U	ug/L	50.0	10	11/22/2010	SV	1011093
200.8	Beryllium	7.06		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Cadmium	53.3		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Cobalt	81.4		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Copper	4580		ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Lead	5.66		ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Nickel	35.8		ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/22/2010	SV	1011093
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011093
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW012 **Date / Time Sampled:** 10/28/10 14:25 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-44 **Matrix:** Surface Water **Lab Number:** C101101-31 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	3820		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	52500		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	< 250	U	ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	7230		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	742		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	545	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	2040		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	924		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	0.595	J	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	4.69		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	2.56	J	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	7.94		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	291		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	4.50		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	5.44		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW013 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-11 **Matrix:** Surface Water **Lab Number:** C101101-32 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	3550		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	210000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	27700		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	14000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	12800		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	874	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	4980		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	7890		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	2.73		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	22.0		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	36.3		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	128		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	13.3		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	16.3		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW014 **Date / Time Sampled:** 10/28/10 09:45 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-45 **Matrix:** Surface Water **Lab Number:** C101101-33 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	4980		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	231000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	30600		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	15700		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	14900		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	920	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	5430		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	8770		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	3.03		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	25.8		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	46.0		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	121		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	16.1		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	20.2		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis** 000382

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW017 **Date / Time Sampled:** 10/29/10 11:55 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-48 **Matrix:** Surface Water **Lab Number:** C101101-34 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	2570		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	81400		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	186	J	ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	6280		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	3370		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	568	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	2610		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	4910		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	1.08		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	15.8		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	2.34		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	201		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	12.6		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	4.23	J	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW018 **Date / Time Sampled:** 10/29/10 13:30 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-49 **Matrix:** Surface Water **Lab Number:** C101101-35 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	2830		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	71600		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	413		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	6880		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	4040		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	593	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	2190		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	5950		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	0.760	J	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	19.2		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	3.02		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	240		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	11.9		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	5.71		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW019 **Date / Time Sampled:** 10/29/10 12:49 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-50 **Matrix:** Surface Water **Lab Number:** C101101-36 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	10100		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	174000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	4460		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	13600		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	21900		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1420		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	5520		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	27600		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	3.80		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	72.8		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	22.6		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	820		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	75.6		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	13.6		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW019 DUP **Date / Time Sampled:** 10/29/10 12:49 **Workorder:** C101101 A
EPA Tag No.: No Tag Prefix-57 **Matrix:** Surface Water **Lab Number:** C101101-37 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	10200		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	174000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	4570		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	13700		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	22000		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	1440		ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	5560		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	27700		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	3.96		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	74.2		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	22.6		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	848		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	76.6		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	13.7		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW020 **Date / Time Sampled:** 10/29/10 13:50 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-51 **Matrix:** Surface Water **Lab Number:** C101101-38 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	996		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	45100		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	<250	U	ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	5520		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	306		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	462	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	1150		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	1920		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	<10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	<50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	<1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	8.88		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	<1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	91.1		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	4.01		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	<1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	4.42	J	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	<2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	<10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW021 **Date / Time Sampled:** 10/31/10 11:10 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-58 **Matrix:** Surface Water **Lab Number:** C101101-39 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	1520		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	55900		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	<250	U	ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	7150		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	550		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	517	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	1260		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	2550		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	<10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	26.3	J	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	0.649	J	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	12.0		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	<1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	105		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	2.62		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	<1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	6.43		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	<2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	<10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW032 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-13 **Matrix:** Surface Water **Lab Number:** C101101-40 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	275		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	76900		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	2630		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	5720		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	1270		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	856	J	ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	3570		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	558		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	1.76		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	6.34		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	13.9		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010

TDF #: DG-216

Certificate of Analysis

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW034 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-15 **Matrix:** Surface Water **Lab Number:** C101101-41 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	530		ug/L	20.0	1	11/22/2010	SW	1011093
200.7	Calcium	91000		ug/L	100	1	11/22/2010	SW	1011093
200.7	Iron	1980		ug/L	100	1	11/22/2010	SW	1011093
200.7	Magnesium	5630		ug/L	100	1	11/22/2010	SW	1011093
200.7	Manganese	2560		ug/L	2.00	1	11/22/2010	SW	1011093
200.7	Potassium	1010		ug/L	250	1	11/22/2010	SW	1011093
200.7	Sodium	3150		ug/L	250	1	11/22/2010	SW	1011093
200.7	Zinc	1030		ug/L	10.0	1	11/22/2010	SW	1011093
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011093
200.8	Beryllium	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Cadmium	2.96		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Cobalt	7.33		ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Copper	26.1		ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Lead	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Molyhdenum	0.670	J	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Nickel	2.96	J	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011093
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011093
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011093

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW036 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-17 **Matrix:** Surface Water **Lab Number:** C101101-42 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7800		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	171000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	12200		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	10600		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	4390		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1780		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4460		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	2260		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	0.910	J	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	5.87		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	23.5		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	146		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	18.9		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	0.900	J	ug/L	0.500 u	5	11/22/2010	SV	1011094
200.8	Nickel	11.7		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	0.891	J	ug/L	0.500 u	5	11/22/2010	SV	1011094
200.8	Thallium	6.35		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW037 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-18 **Matrix:** Surface Water **Lab Number:** C101101-43 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7580		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	172000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	14800		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	10900		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5280		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1580		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4310		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	2800		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	<10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	<50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	0.986	J	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	7.38		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	24.7		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	175		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	22.4		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	0.557	J	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	11.5		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	<2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	4.02	J	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	<10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW039 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-19 **Matrix:** Surface Water **Lab Number:** C101101-44 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	8320		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	165000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	17600		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11300		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5610		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1680		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4090		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3000		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	0.925	J	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	7.47		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	27.3		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	184		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	25.7		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	12.7		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	2.77	J	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW040 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-20 **Matrix:** Surface Water **Lab Number:** C101101-45 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	17100		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	57800		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	32700		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	12600		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5010		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1300		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	2180		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	1070		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.72		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	4.41		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	59.1		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	229		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	95.6		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	33.2		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW041 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-21 **Matrix:** Surface Water **Lab Number:** C101101-46 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	8090		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	171000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	17200		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11300		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5710		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1680		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4150		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3090		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.58		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	8.71		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	26.7		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	184		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	24.5		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	12.9		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW042 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-22 **Matrix:** Surface Water **Lab Number:** C101101-47 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7870		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	175000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	17100		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11600		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5900		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1650		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4280		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3160		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.36		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	8.14		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	25.6		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	191		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	24.1		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	12.2		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis** 000396

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW043 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C10110F
EPA Tag No.: No Tag Prefix-23 **Matrix:** Surface Water **Lab Number:** C101101-48 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	225		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	304000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	19300		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	18900		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	8020		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	2450		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	9620		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	2450		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011094
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	11/22/2010	SV	1011094
200.8	Barium	< 100	U	ug/L	50.0	10	11/22/2010	SV	1011094
200.8	Beryllium	1.31	J	ug/L	1.00	10	11/22/2010	SV	1011094
200.8	Cadmium	2.10		ug/L	1.00	10	11/22/2010	SV	1011094
200.8	Chromium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011094
200.8	Cobalt	34.9		ug/L	1.00	10	11/22/2010	SV	1011094
200.8	Copper	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011094
200.8	Lead	< 2.00	U	ug/L	1.00	10	11/22/2010	SV	1011094
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	11/22/2010	SV	1011094
200.8	Nickel	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011094
200.8	Selenium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011094
200.8	Silver	< 5.00	U	ug/L	1.00	10	11/22/2010	SV	1011094
200.8	Thallium	< 10.0	U	ug/L	5.00	10	11/22/2010	SV	1011094
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010

TDF #: DG-216

Certificate of Analysis

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW044
EPA Tag No.: No Tag Prefix-24
Date / Time Sampled: 10/26/10 00:00
Matrix: Surface Water
Workorder: C101101
Lab Number: C101101-49 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	8150		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	167000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	18200		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11200		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5750		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1650		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4030		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3210		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.32		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	9.09		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	28.9		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	212		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	26.0		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	14.9		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW045 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-25 **Matrix:** Surface Water **Lab Number:** C101101-50 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	4280		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	52700		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	268		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	9690		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	1620		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	714	J	ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	1620		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	907		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	29.0	J	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.05		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	3.79		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	20.6		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	150		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	9.44		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	13.6		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010

TDF #: DG-216

Certificate of Analysis

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW046 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-26 **Matrix:** Surface Water **Lab Number:** C101101-51 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	8340		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	170000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	20000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11300		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5780		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1660		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4030		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3230		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.52		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	8.60		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	28.2		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	212		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	24.8		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	13.2		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW047 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-27 **Matrix:** Surface Water **Lab Number:** C101101-52 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	8450		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	170000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	21800		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11400		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	5860		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1680		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	3990		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3320		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	3.51	J	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.44		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	8.99		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	29.4		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	225		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	24.7		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	14.4		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW049 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-28 **Matrix:** Surface Water **Lab Number:** C101101-53 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	8900		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	171000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	24100		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11800		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	6180		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1720		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	3870		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3510		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	5.00	J	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.27		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	9.51		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	29.8		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	239		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	25.4		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	15.3		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW050 **Date/ Time Sampled:** 10/26/10 00:00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-29 **Matrix:** Surface Water **Lab Number:** C101101-54 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	8830		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	169000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	23900		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	11700		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	6240		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1700		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	3810		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	3560		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	4.63	J	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.50		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	9.70		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	28.7		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	235		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	25.3		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	15.2		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW054 **Date / Time Sampled:** 10/26/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-30 **Matrix:** Surface Water **Lab Number:** C101101-55 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	14400		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	35400		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	27600		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	7560		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	826		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	2130		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	1230		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	1350		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	17.0		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	<50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	0.726	J	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	5.33		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	26.1		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	190		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	57.3		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	<1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	19.6		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	<2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	<5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	<10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW056 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-31 **Matrix:** Surface Water **Lab Number:** C101101-56 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	5440		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	178000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	16000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	12200		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	8750		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1100		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4280		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	4850		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.75		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	12.7		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	30.4		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	355		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	26.8		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	12.2		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW058 **Date / Time Sampled:** 10/27/10 00:00 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-32 **Matrix:** Surface Water **Lab Number:** C101101-57 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	5510		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	182000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	15900		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	12600		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	9150		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	1070		ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	4370		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	5130		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	1.52		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	13.7		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	30.4		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	366		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	27.9		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	12.6		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

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Project Name: Upper Animas - Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-216

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASW059 **Date / Time Sampled:** 10/31/10 12:40 **Workorder:** C101101
EPA Tag No.: No Tag Prefix-56 **Matrix:** Surface Water **Lab Number:** C101101-58 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	13200		ug/L	20.0	1	11/22/2010	SW	1011094
200.7	Calcium	17400		ug/L	100	1	11/22/2010	SW	1011094
200.7	Iron	46400		ug/L	100	1	11/22/2010	SW	1011094
200.7	Magnesium	12000		ug/L	100	1	11/22/2010	SW	1011094
200.7	Manganese	8740		ug/L	2.00	1	11/22/2010	SW	1011094
200.7	Potassium	362	J	ug/L	250	1	11/22/2010	SW	1011094
200.7	Sodium	626		ug/L	250	1	11/22/2010	SW	1011094
200.7	Zinc	24900		ug/L	10.0	1	11/22/2010	SW	1011094
200.8	Antimony	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Arsenic	26.9		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Barium	< 50.0	U	ug/L	25.0	5	11/22/2010	SV	1011094
200.8	Beryllium	0.940	J	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Cadmium	105		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Chromium	5.46		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Cobalt	25.6		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Copper	4690		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Lead	33.8		ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Molybdenum	< 1.00	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Nickel	16.4		ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Selenium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Silver	< 2.50	U	ug/L	0.500	5	11/22/2010	SV	1011094
200.8	Thallium	< 5.00	U	ug/L	2.50	5	11/22/2010	SV	1011094
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	11/22/2010	SV	1011094

"J" Qualifier indicates an estimated value

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REGION VIII
DATA VALIDATION REPORT
INORGANIC

Case No. / TDD No.	Site Name		Operable Unit
C101003, C101004 / 1008-13	Upper Animas Mining District		
RPM/OSC Name			
Sabrina Forrest			
Contractor Laboratory	Contract No.	TDF No.	Laboratory DPO/Region
ESAT – TechLaw, Inc.		DG-214 water and soil	

Review Assigned Date March 28, 2011 Data Validator Diane Short & Assoc. Review
Review Completion Date March 30, 2011 Report Reviewer Kent Alexander

Sample ID	Matrix	Analysis
UASE001D	Sediment	Dissolved (water) and Total Recoverable (soil) Metals by EPA Methods 200.7 and 200.8
UASE002		
UASE003		
UASE001		
UASW001	Water	
UASW001 (should be 001D)		
UAWS002		
UASW003		

DATA QUALITY STATEMENT

( ) Data are ACCEPTABLE according to EPA Functional guidelines with no qualifiers (flags) added by the reviewer.
( ) Data are UNACCEPTABLE according to EPA Functional Guidelines.
(X) Data are acceptable with QUALIFICATIONS noted in review.

Telephone/Communication Logs Enclosed? Yes _____ No ___X___

CLP Project Officer Attention Required? Yes _____ No ___X___ If yes, list the items that require attention:

INORGANIC DATA VALIDATION REPORT

REVIEW NARRATIVE SUMMARY

This data package was reviewed according to "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," (NFG) January 2010.

Raw data were reviewed for completeness and transcription accuracy onto the summary forms. Approximately 10-20% of the results reported in each of the samples, calibrations, and QC analyses were recalculated and verified. If problems were identified during the recalculation of results, a more thorough calculation check was performed.

The data package, TDF No. DG-214, consisted of 4 sediment samples for Total Recoverable Metals and 4 water samples for Dissolved Metals by Methods 200.7 and 200.8 by ICP. The following table lists the data qualifiers added to the sample analyses. Please see Data Qualifier Definitions, attached to the end of this report.

Deliverables:
Note that the laboratory forms do not contain times of analysis on the result forms nor on the QC and Calibration Forms. This is not uncommon for CLP-type forms, but it means that the raw data must be spot checked to verify the calibration associations. As there were no outliers, no further action is taken.

Sample Tracking:
There are Deliverable Submission Forms, but no actual laboratory log-in forms. The integrity of the samples cannot be verified. There are no courier forms or tracking identifications. Sample authentication cannot be verified. Samples were collected on 10/8/2010 and relinquished on 10/11/2010. There is no record of custody for that time period.

For the waters samples, the location ID was logged for the sample ID so the UASW001 and UASW001D distinction was not carried over into the laboratory result forms. Laboratory sample C1010004-2 should be client ID UASW001D.

No shipping or receiving problems were noted in the narrative. As the client was not notified of custody or integrity issues, no further action is taken.

Blanks:
There are results reported for many of the ICB and CCBs, but none are above the MDLs recorded on the result forms (the ICB/CCB forms only note the PQLs) with the exception of iron reported at 28.9 mg/kg for QC set 1010049 for ICP soils. All data are > 5 x Blank and no qualification is required.

The laboratory notes that cadmium was detected in the prep blank at < 2 x PQL. The result for cadmium is reported at 103 ug/kg. The RL for cadmium was raised from 20 ug/kg to 30 ug/kg. The client will need to determine if the elevated limits meet project criteria. All client data were > 5 x blank and no qualification is required.

There are no rinse blanks, which would be appropriate if dedicated equipment was used.

Interference Check:
The ICSA value for iron is 250,000 ug/l for water or 25,000 mg/kg for soil . Iron values for the sediments were greater than the ICSA, but the QC check was well within limits and no qualifications were required.

Laboratory Control Sample:
The LCS recovery for barium was at 56%. The LCS limit noted is 0 – 152%. These are extremely wide windows and the reviewer recommends considering this low bias in the use of the barium data. Data were not, however, qualified per the EPA guidance.

Detection Limits:
Note that the sediment samples for ICP were diluted 5x and those for ICPMS were diluted 10X. The analytes run by ICPMS were extremely high for lead, arsenic and vanadium. The review recommends using the ICP values that are in the raw data for these analytes, although the results were within an acceptable RPD. It is the lower values that are significantly different between the two types of analysis/instrumentation. The client will need to determine if the elevated limits meet project criteria.

Matrix Spike
Data are qualified JMS#, where # is the spike recovery. The EPA qualifier is 'J'. Data could be biased high or low proportional to the recovery. The sample results were > 4 x spike for outlier sediment spikes for aluminum, barium, iron, manganese, magnesium, zinc and calcium. Data are not qualified as the recovery is not statistically valid. The laboratory limits (65-125%) are wider than the CLP limits. The limits noted in the NFG are used for qualification. The following table lists the spike recoveries outside control limits, samples affected, and data qualifiers:

Field Duplicates:
If the UASE001 and 001D and the UASW001 and 001D are field duplicates, they meet the field duplicate precision criteria for low level and > 5 x CRQL results.

Sample ID	Elements	Qualifiers	Reason for Qualification	Review Section
All sediment samples	Barium	J-	LCS 56% - recommended, but not applied	13
All sediment samples	Sodium	J+	MS 136%	9
All sediment samples	Titanium	J-	MS 67%	

1. DELIVERABLES

All deliverables were present as specified in the Statement of Work.
Yes___ No_X__

Comments: There are Deliverable Submission Forms, but no actual laboratory log-in forms. The integrity of the samples cannot be verified. There are no courier forms or tracking identifications. Sample authentication cannot be verified.
Note that the laboratory forms do not contain times of analysis on the result forms nor on the QC and Calibration Forms. This is not uncommon for CLP-type forms, but it means that the raw data must be spot checked to verify the calibration associations. As there were no outliers, no further action is taken.

2. HOLDING TIMES AND PRESERVATION CRITERIA

All technical holding times and preservation criteria were met.
Yes_X__ No____

Comments: The samples were analyzed within specified holding times (180 days for metals and 28 days for mercury). No temperature reading for the cooler was recorded. Per the chain of custody, there were pre-printed fields that noted the sediment samples were (to be) preserved to 4 C and the waters to pH<2, but this cannot be verified as there are no log-in forms.

No shipping or receiving problems were noted in the narrative. As the client was not notified of custody or integrity issues, no further action is taken.

3. INSTRUMENT CALIBRATIONS: STANDARDS AND BLANKS

Initial instrument calibrations were performed according to SOW requirements.
Yes_X__ No____

Comments: None.

The instruments were calibrated daily and each time an analysis run was performed.
Yes_X__ No____

Comments: None.

The instruments were calibrated using one blank and the appropriate number of standards.
Yes_X__ No____

Comments: None.

4. **SAMPLE ANALYSIS RESULTS**

Sample analyses were entered correctly on Form Is.
Yes_X_ No____

Comments: None.

5. **INITIAL AND CONTINUING CALIBRATION VERIFICATION**

The initial and continuing calibration verification standards (ICV and CCV, respectively) met SOW requirements.
Yes_X_ No____

Comments: None.

The calibration verification results were within 90-110% recovery for metals, 85-115% for cyanide, and 80-120% for mercury.
Yes_X_ No____

Comments: None.

The continuing calibration standards were run at 10% frequency or every two hours.
Yes_X_ No____

Comments: None.

6. **CRQL CHECK STANDARD**

ICP Analysis: Standards (CRI) were analyzed at the beginning of each sample analysis run and every 20 analytical samples, immediately preceding the interferences check sample analyses, but not before ICV analysis.
Yes_X_ No___ NA___

Comments: None.

The CRI recoveries were within 70-130% (50 – 150% for ICP: Sb, Pb, Tl; ICP/MS: Co, Mn, Zn) for required elements.
Yes_X_ No____

Comments: None.

7. **BLANKS**

The initial and continuing calibration blanks (ICB and CCB, respectively) met SOW requirements.
Yes____ No_X_

Comments: There are results reported for many of the ICB and CCBs, but none are above the MDLs recorded on the result forms (the ICB/CCB forms only note the PQLs) with the exception of iron reported at 28.9 mg/kg for QC set 1010049 for ICP soils. All data are > 5 x Blank and no qualification is required.

The continuing calibration blanks were run at 10% frequency.
Yes_X_ No____

Comments: None.

A laboratory/preparation blank was run at the frequency of one per twenty samples, or per sample delivery group (whichever is more frequent), and for each matrix analyzed.
Yes_X_ No____

Comments: None

All analyzed blanks were free of contamination.
Yes____ No___X

Comments: The laboratory notes that cadmium was detected in the prep blank at < 2 x PQL. The result for cadmium is reported at 103 ug/kg. The RL for cadmium was raised from 20 ug/kg to 30 ug/kg. The client will need to determine if the elevated limits meet project criteria. All client data were > 5 x blank and no qualification is required.

8. ICP INTERFERENCE CHECK SAMPLE

The ICP interference check sample (ICS) was run at the beginning of each sample analysis run, but not prior to the ICV.
Yes_X_ No____

Comments: None.

Percent recovery of the analytes in the ICS solutions were within the range of 80-120% or the result was within ±2x the CRQL.
Yes_X_ No____

Comments: None.

Sample results for aluminum, calcium, iron, and magnesium were less than the ICSA values.
Yes____ No_X_

Comments: The ICSA value for iron is 250,000 ug/l for water or 25,000 mg/kg for soil . Iron values for the sediments were greater than the ICSA, but The QC check was well within limits and no qualifications were required.

No sample results contain potential false positives and false negatives.
Yes_X_ No____

Comments: None.

9. MATRIX SPIKE SAMPLE ANALYSIS

A matrix spike sample was analyzed with every twenty or fewer samples of a similar matrix, or one per sample delivery group (whichever is more frequent).
Yes_X_ No____ NA_____

Comments: UASE001 and UASW001 were used for the MS/MSD samples.

The percent recoveries (%Rs) were calculated correctly.
Yes_X_ No____ NA_____

Comments: None.

Spike recoveries were within the range of 75-125% (an exception is granted where the sample concentration is four times the spike concentration).
Yes____ No_X_

Comments: Data are qualified JMS#, where # is the spike recovery. Data could be biased high or low proportional to the recovery. The sample results were > 4 x spike for outlier sediment spikes for aluminum, barium, iron, manganese, magnesium, zinc and calcium. Data are not qualified as the recovery is not statistically valid. The laboratory limits (65-125%) are wider than the CLP limits. The limits noted above are used for qualification. The following table lists the spike recoveries outside control limits, post digestion spike recoveries, samples affected, and data qualifiers:

Element	Matrix Spike %R	Post-Digestion %R	Samples Affected	Qualifiers
Sodium	136/ 136	104%	All sediment detects	JMS136
Titanium	67/ 71	Not in post spike	All sediment samples	JMS67

10. POST DIGEST SPIKE RECOVERY

A post-digest spike was performed for those elements that did not meet the specified criteria (i.e., Pre-digestion/pre-distillation spike recovery falls outside of control limits and sample result is less than four times the spike amount added, exception: Ag, Hg).
Yes_X_ No____ NA_____

Comments: See Section 9.0.

11. DUPLICATE SAMPLE ANALYSIS

Duplicate sample analysis was performed with every twenty or fewer samples of a similar matrix, or one per sample delivery group (whichever is more frequent).
Yes_X_ No___ NA_____

Comments: Duplicates and MS Duplicates are reported.

The RPDs were calculated correctly.
Yes_X_ No___ NA_____

Comments: None.

For sample concentrations greater than five times the CRQL, RPDs were < 20% (limits of <35% apply for soil/sediments/tailings samples).
Yes_X_ No___ NA_____

Comments: None.

For sample concentrations less than five times the CRQL, duplicate analysis results were within the control window of < CRQL (two times CRQL for soils).
Yes_X_ No___ NA_____

Comments: None.

12. ICP-MS

The ICP MS tune met SOW requirements.
Yes_X_ No___ NA___

Comments: The ICP MS instrument was correctly tuned prior to analysis and all tuning criteria were met. The % RSDs were within the 5% limits for the tune. The Ba/Ba++ and Ce/CeO ratios were reported and within limits. The amu (atomic mass units) at half peak width were within limits (in the range of 0.7 – 0.8).

The minimum number of internal standards were added to the analyses and bracketed the target analyte masses.
Yes_X_ No___

Comments: None.

All percent relative intensities were within 60-125%.
Yes_X_ No___

Comments: None.

13. LABORATORY CONTROL SAMPLE

The laboratory control sample (LCS) was prepared and analyzed with every twenty or fewer samples of a similar matrix, or one per sample delivery group (whichever is more frequent).
Yes_X_ No____

Comments: Note that for sediments, the LCS does not contain titanium, strontium or molybdenum. This is not uncommon as the LCS is a standard reference soil and these analytes are not routinely present.

All results were within control limits.
Yes_X_ No____

Comments: The LCS recovery for barium was at 56%. The LCS limit noted is 0 – 152%. These are extremely wide windows and the reviewer recommends considering this low bias in the use of the barium data. Data were not, however, qualified per the EPA guidance.

14. ICP-SERIAL DILUTION QC

A serial dilution was performed for ICP analysis with every twenty or fewer samples of a similar matrix, or one per sample delivery group, whichever is more frequent.
Yes_X_ No____

Comments: None.

The serial dilution was without interference problems as defined by the SOW or NFG.
Yes_X_ No____

Comments: The serial dilution %Ds were less than 10% or the original sample result was less than 50> the RL.

15. ANNUAL METHOD DETECTION LIMITS (MDL)

MDLs were provided for all elements on the target analyte list.
Yes_X_ No____

Comments: Last updated February 2010

Reported MDLs met SOW requirements.

Yes_X_ No____

Comments: Note that the sediment samples for ICP were diluted 5x and those for ICPMS were diluted 10X. The analytes run by ICPMS were extremely high for lead, arsenic and vanadium. The review recommends using the ICP values that are in the raw data for these analytes, although the results were within an acceptable RPD. It is the lower values that are significantly different between the two types of analysis/ instrumentation. These can be reported in a comparison table upon request. The project manager will determine if project limits are met.

16. INTERELEMENT CORRECTION FACTORS FOR ICP

Interelement corrections for ICP were reported.
Yes____ No_X_

Comments: Interelement corrections were not included. No action was required.

17. ICP LINEAR RANGES

ICP linear ranges were reported.
Yes_X_ No____

Comments: The linear ranges were updated in February 2010.

18. PREPARATION LOG

Information on the preparation of samples for analysis was reported on laboratory bench sheets as part of the raw data deliverable.
Yes_X_ No____

Comments: None.

19. ANALYSIS RUN LOG

A Form with the required information was filled out for each analysis run in the data package.
Yes_X_ No____

Comments: None.

20. Additional Comments or Problems/Resolutions Not Addressed Above

Yes_X_ No____

Comment: For the water samples, the location ID was logged for the sample ID so the UASW001 and UASW001D distinction was not carried over into the laboratory result forms. Laboratory sample C1010004-2 should be client ID UASW001D.
Samples were collected on 10/8/2010 and relinquished on 10/11/2010. There is no record of custody for that time period.

If the UASE001 and 001D and the UASW001 and 001D are field duplicates, they meet the field duplicate precision criteria for low level and > 5 x CRQL results.
There are no rinse blanks, which would be appropriate if dedicated equipment was used.

INORGANIC DATA QUALITY ASSURANCE REVIEW

Region VIII

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality. Use of additional qualifiers should be carefully considered. Definitions for all qualifiers used should be provided with each report.

GENERAL QUALIFIERS for use with both INORGANIC and ORGANIC DATA

R	-	Reported value is "rejected." The data are unusable. Resampling or reanalysis may be necessary to verify the presence or absence of the compound.
J	-	The associated numerical value is an estimated quantity and is the approximate concentration of the analyte in the sample.
J+	-	The associated numerical value is an estimated quantity but the result may be biased high.
J-	-	The associated numerical value is an estimated quantity but the result may be biased low.
U J	-	The reported quantitation limit is estimated because Quality Control criteria were not met. Element or compound may or may not be present in the sample.
N J	-	Estimated value of a tentatively identified compound. (Identified with a CAS number.) ORGANICS analysis only.
U	-	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

ACRONYMS

CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
CRQL	Contract Required Quantitation Limit
CRI	CRQL standard required for ICP
CV	Cold Vapor
EPA	U.S. Environmental Protection Agency
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICSA	Interference Check Sample (Solution A)
ICSAB	Interference Check Sample (Solution AB)
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
MDL	Method Detection Limit
MS	Matrix Spike
MSD	MS Duplicate
NFG	EPA CLP National Functional Guidelines for Inorganic Data Review
PDS	Post Digestion Spike
QC	Quality Control
RPD	Relative Percent Difference
RPM	Regional Project Manager
RSD	Percent Relative Standard Deviation
SA	Spike Added
SAS	Special Analytical Services
SDG	Sample Delivery Group
SOW	Statement of Work
SR	Sample Result
SSR	Spiked Sample Result

Project Name: Upper Animas - Rush SED - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASE001D **Date / Time Sampled:** 10/08/10 00:00 **Workorder:** C101003
EPA Tag No.: **Matrix:** Sediment **Lab Number:** C101003-01 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 200.2 / 200.8	Antimony	4230		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Arsenic	45400		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cadmium	990		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Chromium	3500		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cobalt	5360		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Lead	460000		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Molybdenum	4660		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Nickel	2840		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Selenium	2530		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Silver	2570		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Thallium	<997	U	ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Vanadium	19000		ug/kg dry wt	997	10	10/13/2010	SV	1010049
EPA 200.2/200.7	Aluminum	8250		mg/kg dry wt	9.97	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Barium	215		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Beryllium	<2.49	U	mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Calcium	1550		mg/kg dry wt	49.9	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Copper	116		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Iron	58400		mg/kg dry wt	49.9	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Magnesium	2630		mg/kg dry wt	49.9	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Manganese	801		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Potassium	1220		mg/kg dry wt	125	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Sodium	<249	U	mg/kg dry wt	125	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Strontium	83.6		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Titanium	23.8		mg/kg dry wt	2.49 J-	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Zinc	339		mg/kg dry wt	4.99	5	10/12/2010	SW	1010049

Project Name: Upper Animas - Rush SED - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASE002 **Date / Time Sampled:** 10/08/10 00:00 **Workorder:** C101003
EPA Tag No.: **Matrix:** Sediment **Lab Number:** C101003-02 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 200.2 / 200.8	Antimony	5800		ug/kg dry wt	500	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Arsenic	49600		ug/kg dry wt	500	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cadmium	674		ug/kg dry wt	99.9	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Chromium	2890		ug/kg dry wt	500	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cobalt	2600		ug/kg dry wt	99.9	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Lead	382000		ug/kg dry wt	99.9	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Molybdenum	3410		ug/kg dry wt	99.9	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Nickel	2230		ug/kg dry wt	500	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Selenium	2760		ug/kg dry wt	500	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Silver	2820		ug/kg dry wt	99.9	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Thallium	1170		ug/kg dry wt	500	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Vanadium	18300		ug/kg dry wt	999	10	10/13/2010	SV	1010049
EPA 200.2/200.7	Aluminum	5420		mg/kg dry wt	9.99	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Barium	326		mg/kg dry wt	0.999	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Beryllium	< 2.50	U	mg/kg dry wt	0.999	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Calcium	863		mg/kg dry wt	50.0	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Copper	39.5		mg/kg dry wt	0.999	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Iron	46900		mg/kg dry wt	50.0	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Magnesium	2220		mg/kg dry wt	50.0	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Manganese	235		mg/kg dry wt	0.999	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Potassium	1380		mg/kg dry wt	125	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Sodium	< 250	U	mg/kg dry wt	125	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Strontium	90.9		mg/kg dry wt	0.999	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Titanium	17.5		mg/kg dry wt	2.50 J	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Zinc	199		mg/kg dry wt	5.00	5	10/12/2010	SW	1010049

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Project Name: Upper Animas - Rush SED - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASE003 **Date / Time Sampled:** 10/08/10 00:00 **Workorder:** C101003
EPA Tag No.: **Matrix:** Sediment **Lab Number:** C101003-03 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 200.2 / 200.8	Antimony	1190		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Arsenic	19800		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cadmium	8840		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Chromium	4120		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cobalt	11500		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Lead	882000		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Molybdenum	7200		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Nickel	7950		ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Selenium	877	J	ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Silver	5080		ug/kg dry wt	99.7	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Thallium	503	J	ug/kg dry wt	499	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Vanadium	18000		ug/kg dry wt	997	10	10/13/2010	SV	1010049
EPA 200.2/200.7	Aluminum	9830		mg/kg dry wt	9.97	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Barium	128		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Beryllium	1.58	J	mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Calcium	3420		mg/kg dry wt	49.9	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Copper	203		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Iron	24800		mg/kg dry wt	49.9	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Magnesium	5520		mg/kg dry wt	49.9	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Manganese	8730		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Potassium	750		mg/kg dry wt	125	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Sodium	<249	U	mg/kg dry wt	125	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Strontium	44.9		mg/kg dry wt	0.997	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Titanium	62.7		mg/kg dry wt	2.49 J-	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Zinc	2400		mg/kg dry wt	4.99	5	10/12/2010	SW	1010049

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Project Name: Upper Animas - Rush SED - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Total Recov) by EPA 200/7000 Series Methods

Station ID: UASE001 **Date / Time Sampled:** 10/08/10 00:00 **Workorder:** C101003
EPA Tag No.: **Matrix:** Sediment **Lab Number:** C101003-04 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 200.2 / 200.8	Antimony	5410		ug/kg dry wt	494	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Arsenic	52900		ug/kg dry wt	494	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cadmium	829		ug/kg dry wt	98.8	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Chromium	3490		ug/kg dry wt	494	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Cobalt	4590		ug/kg dry wt	98.8	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Lead	531000		ug/kg dry wt	98.8	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Molybdenum	5560		ug/kg dry wt	98.8	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Nickel	2830		ug/kg dry wt	494	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Selenium	2980		ug/kg dry wt	494	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Silver	3790		ug/kg dry wt	98.8	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Thallium	643	J	ug/kg dry wt	494	10	10/13/2010	SV	1010049
EPA 200.2 / 200.8	Vanadium	19300		ug/kg dry wt	988	10	10/13/2010	SV	1010049
EPA 200.2/200.7	Aluminum	9450		mg/kg dry wt	9.88	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Barium	261		mg/kg dry wt	0.988	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Beryllium	<2.47	U	mg/kg dry wt	0.988	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Calcium	1620		mg/kg dry wt	49.4	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Copper	158		mg/kg dry wt	0.988	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Iron	63100		mg/kg dry wt	49.4	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Magnesium	2490		mg/kg dry wt	49.4	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Manganese	602		mg/kg dry wt	0.988	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Potassium	1330		mg/kg dry wt	124	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Sodium	<247	U	mg/kg dry wt	124	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Strontium	91.8		mg/kg dry wt	0.988	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Titanium	20.1		mg/kg dry wt	2.47 J	5	10/12/2010	SW	1010049
EPA 200.2/200.7	Zinc	364		mg/kg dry wt	4.94	5	10/12/2010	SW	1010049

"J" Qualifier indicates an estimated value

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Project Name: Upper Animas - Rush Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: UASW001 **Date / Time Sampled:** 10/08/10 00:00 **Workorder:** C101004
EPA Tag No.: **Matrix:** Water **Lab Number:** C101004-01 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	3240		ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Barium	18.1		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Beryllium	< 5.00	U	ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Calcium	107000		ug/L	100	1	10/11/2010	SW	1010050
200.7	Copper	88.6		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Iron	2170		ug/L	100	1	10/11/2010	SW	1010050
200.7	Magnesium	6790		ug/L	100	1	10/11/2010	SW	1010050
200.7	Manganese	3040		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Potassium	1200		ug/L	250	1	10/11/2010	SW	1010050
200.7	Sodium	3300		ug/L	250	1	10/11/2010	SW	1010050
200.7	Strontium	1230		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Thallium	< 50.0	U	ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Titanium	< 20.0	U	ug/L	5.00	1	10/11/2010	SW	1010050
200.7	Zinc	1530		ug/L	10.0	1	10/11/2010	SW	1010050
200.8	Antimony	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Cadmium	4.54		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Chromium	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Cobalt	12.7		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Lead	8.38		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Molybdenum	1.23	J	ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Nickel	6.69	J	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Selenium	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Silver	1.19	J	ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	10/12/2010	SV	1010052
2340B	Hardness	295		mg/L	2	1	10/11/2010	SW	1010050

DS 4/11

Project Name: Upper Animas - Rush Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: UASW001 (B) **Date/Time Sampled:** 10/08/10 00:00 **Workorder:** C101004
EPA Tag No.: **Matrix:** Water **Lab Number:** C101004-02 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	3320		ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Barium	18.4		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Beryllium	< 5.00	U	ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Calcium	108000		ug/L	100	1	10/11/2010	SW	1010050
200.7	Copper	91.3		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Iron	2180		ug/L	100	1	10/11/2010	SW	1010050
200.7	Magnesium	6930		ug/L	100	1	10/11/2010	SW	1010050
200.7	Manganese	3060		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Potassium	1210		ug/L	250	1	10/11/2010	SW	1010050
200.7	Sodium	3350		ug/L	250	1	10/11/2010	SW	1010050
200.7	Strontium	1260		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Thallium	< 50.0	U	ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Titanium	< 20.0	U	ug/L	5.00	1	10/11/2010	SW	1010050
200.7	Zinc	1550		ug/L	10.0	1	10/11/2010	SW	1010050
200.8	Antimony	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Cadmium	4.91		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Chromium	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Cobalt	11.5		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Lead	7.99		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Nickel	5.49	J	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Selenium	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Silver	< 5.00	U	ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	10/12/2010	SV	1010052
2340B	Hardness	299		mg/L	2	1	10/11/2010	SW	1010050

KSA 4/4/11

Project Name: Upper Animas - Rush Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: UASW002 **Date / Time Sampled:** 10/08/10 00:00 **Workorder:** C101004
EPA Tag No.: **Matrix:** Water **Lab Number:** C101004-03 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	7350		ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Barium	12.5		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Beryllium	< 5.00	U	ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Calcium	165000		ug/L	100	1	10/11/2010	SW	1010050
200.7	Copper	180		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Iron	7260		ug/L	100	1	10/11/2010	SW	1010050
200.7	Magnesium	10400		ug/L	100	1	10/11/2010	SW	1010050
200.7	Manganese	4570		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Potassium	1750		ug/L	250	1	10/11/2010	SW	1010050
200.7	Sodium	4350		ug/L	250	1	10/11/2010	SW	1010050
200.7	Strontium	1950		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Thallium	< 50.0	U	ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Titanium	< 20.0	U	ug/L	5.00	1	10/11/2010	SW	1010050
200.7	Zinc	2590		ug/L	10.0	1	10/11/2010	SW	1010050
200.8	Antimony	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Arsenic	< 20.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Cadmium	7.50		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Chromium	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Cobalt	22.5		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Lead	30.7		ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Molybdenum	< 2.00	U	ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Nickel	11.4		ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Selenium	< 10.0	U	ug/L	5.00	10	10/12/2010	SV	1010052
200.8	Silver	< 5.00	U	ug/L	1.00	10	10/12/2010	SV	1010052
200.8	Vanadium	< 20.0	U	ug/L	10.0	10	10/12/2010	SV	1010052
2340B	Hardness	456		mg/L	2	1	10/11/2010	SW	1010050

4/4/11
KJA

Project Name: Upper Animas - Rush Water - Oct 2010 **Certificate of Analysis**

TDF #: DG-214

Metals (Dissolved) by EPA 200/7000 Series Methods

Station ID: UASW003 **Date / Time Sampled:** 10/08/10 00:00 **Workorder:** C101004
EPA Tag No.: **Matrix:** Water **Lab Number:** C101004-04 A

Method	Parameter	Results	Qualifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
200.7	Aluminum	75.3		ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Barium	25.5		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Beryllium	< 5.00	U	ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Calcium	49500		ug/L	100	1	10/11/2010	SW	1010050
200.7	Copper	3.69		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Iron	< 250	U	ug/L	100	1	10/11/2010	SW	1010050
200.7	Magnesium	3190		ug/L	100	1	10/11/2010	SW	1010050
200.7	Manganese	1480		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Potassium	639	J	ug/L	250	1	10/11/2010	SW	1010050
200.7	Sodium	2280		ug/L	250	1	10/11/2010	SW	1010050
200.7	Strontium	509		ug/L	2.00	1	10/11/2010	SW	1010050
200.7	Thallium	< 50.0	U	ug/L	20.0	1	10/11/2010	SW	1010050
200.7	Titanium	< 20.0	U	ug/L	5.00	1	10/11/2010	SW	1010050
200.7	Zinc	338		ug/L	10.0	1	10/11/2010	SW	1010050
200.8	Antimony	< 5.00	U	ug/L	2.50	5	10/12/2010	SV	1010052
200.8	Arsenic	< 10.0	U	ug/L	2.50	5	10/12/2010	SV	1010052
200.8	Cadmium	0.640	J	ug/L	0.500	5	10/12/2010	SV	1010052
200.8	Chromium	< 5.00	U	ug/L	2.50	5	10/12/2010	SV	1010052
200.8	Cobalt	< 1.00	U	ug/L	0.500	5	10/12/2010	SV	1010052
200.8	Lead	< 1.00	U	ug/L	0.500	5	10/12/2010	SV	1010052
200.8	Molybdenum	0.984	J	ug/L	0.500	5	10/12/2010	SV	1010052
200.8	Nickel	< 5.00	U	ug/L	2.50	5	10/12/2010	SV	1010052
200.8	Selenium	< 5.00	U	ug/L	2.50	5	10/12/2010	SV	1010052
200.8	Silver	< 2.50	U	ug/L	0.500	5	10/12/2010	SV	1010052
200.8	Vanadium	< 10.0	U	ug/L	5.00	5	10/12/2010	SV	1010052
2340B	Hardness	137		mg/L	2	1	10/11/2010	SW	1010050

"J" Qualifier indicates an estimated value

4/4/11
KsA

REGION VIII
DATA VALIDATION REPORT
ORGANICS

Case/TDD No.	Site Name		Operable Unit
40755 / 1008-16	Upper Animas Mining District		
RPM/OSC Name			
Sabrina Forrest			
Contractor Laboratory	Contract No.	SDG No.	Laboratory DPO/Region
ALS Laboratory Group	EPW05026	H35E5	

Review Assigned Date: November 23, 2010 Data Validator: Lesley Boyd
Review Completion Date: December 17, 2010 Report Reviewer: Fred Luck

Sample ID	Matrix	Analysis
H35E5	Sediment	CLP – Aroclors
H35E6		
H35E7		
H35E8		
H35E9		
H35F0		
H35F1		
H35F2		
H35F3		
H35F4		
H35F5		
H35F6		
H35F7		
H35F8		
H35F9		

Sample ID	Matrix	Analysis
H35G0	Sediment	CLP – Aroclors
H35G1		
H35G2		
H35G3		
H35G4		

DATA QUALITY STATEMENT

( ) Data are ACCEPTABLE according to EPA Functional Guidelines with no qualifiers (flags) added by the reviewer.
( ) Data are UNACCEPTABLE according to EPA Functional Guidelines.
(X) Data are acceptable with QUALIFICATIONS noted in review.

PO Attention Required? Yes _____ No ___X___ If yes, list the items that require attention:

ORGANIC DATA VALIDATION REPORT

REVIEW NARRATIVE SUMMARY

This data package was reviewed according to the EPA document "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008.

Raw data were reviewed for completeness and transcription accuracy onto the summary forms. Approximately 10-15% of the results reported in each of the samples, calibrations, and QC analyses were recalculated and verified. If problems were identified during the recalculation of results, a more thorough calculation check was performed.

The data package, SDG No. H35E5, consisted of 20 sediment / mine sediment / soil samples for CLP Aroclor analyses by SOM01.2.

The following tables list data qualifiers added to the data. (Please see Data Qualifier Definitions, attached to the end of this report.)

Sample Number	Aroclor Compound	Qualifier	Reason For Qualification	Review Section
H35G1	All compounds	UJ	Excessive moisture content in sample	12

1. HOLDING TIMES AND PRESERVATION

All holding times criteria were met.

AROCLOR: Yes_X_ No____

All preservation criteria were met.

AROCLOR: Yes___ No_X_

Comments: The soil samples were extracted within 14 days from sample collection and all extracts were analyzed within 40 days from sample extraction.

According to the Chain-of-Custody record and case narrative, the two sample coolers were each received at a temperature of 7°C, which is outside the recommended temperature range of 4 ± 2°C. When the sample preservation criteria are not met, but the sample analysis and extraction are within the technical holding times then professional judgment is used whether to qualify the data. No action was taken since the preservation exceedence was minimal and the extraction and holding times were well within the established parameters.

2. INITIAL INSTRUMENT CALIBRATIONS

The multi-component target compound analyses were performed according to method requirements:

AROCLOR: Yes_X_ No____

Comments: None.

Initial instrument calibrations were performed according to requirements and met the specified control limits listed in the functional guidelines.

AROCLOR: Yes_X_ No____

Comments: The Mean Retention Times (RTs) for each of the three to five major peaks and the RT of the surrogates have been determined. The RT Window has been calculated as ±0.07 for each of the three to five Aroclor peaks and ±0.05 and ±0.10 for the surrogates tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB), respectively.

At least one chromatogram from each of the Aroclor Standards yields peaks that give reflector deflections between 50-100% of full scale.

The concentrations of the five concentration level standards containing the Aroclors was prepared at the following concentrations 100, 200, 400, 800, and 1600 mg/mL and surrogates at 5.0, 10, 20, 40, and 80 ng/mL for TCX, and 10, 20, 40, 80, and 160 ng/mL for DCB.

The percent relative standard deviations (%RSDs) for the calibration peaks used to quantitate the Aroclors were within 20%. Summary forms and raw data were evaluated.

3. CONTINUING CALIBRATION VERIFICATION

Continuing instrument calibrations were performed according to requirements and met specified control limits listed in the functional guidelines.

AROCLOR: Yes_X_ No____

Comments: Continuing calibration standards were analyzed at the required frequency.

The %Ds were less than or equal to 15% for the opening Aroclor 1016/1260 standards. All %Ds for the closing Aroclor 1016/1260 standards were less than 50%.

No more than 14 hours elapsed from the injection of the instrument blank that begins an analytical sequence and the injection of the last mid-point concentration of the Aroclor Standards that ends an analytical sequence.

No more than 12 hours elapsed from the injection of the instrument blank that begins an analytical sequence and the injection of the last sample or blank that is part of an analytical sequence. Summary forms and raw data were evaluated.

4. BLANKS

The laboratory blank analysis was performed according to method requirements and met specified control limits.

AROCLOR: Yes_X_ No____

Comments: A Method blank was extracted along with the field samples at a rate of no more than 20 field samples per method blank and analyzed on the same GC/Electronic Capture Detector (GC/ECD) used for the field samples.

An acceptable instrument blank was run at the completion of the initial calibration sequence. Also an acceptable instrument blank was run at the beginning and ending of the analytical sequence for this sample delivery group.

A sulfur cleanup was not required; therefore a sulfur cleanup blank was not required for this sample delivery group.

5. SURROGATE SPIKES

Surrogate compound recovery analysis was performed according to method requirements and results met specified control limits.

AROCLOR: Yes_X_ No____

Comments: Two surrogate spikes, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB), were added to all samples, including Matrix Spike / Matrix Spike Duplicate (MS/MSDs), Laboratory Control Samples (LCSs), and blanks.

The surrogate percent recoveries (%Rs) were all within the QC limits (30-150%) for all samples. Summary forms and raw data were evaluated.

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATES (MS/MSDs)

Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses were performed according to method requirements and results met recommended recovery and precision limits.

AROCLOR: Yes____ No_X_

Comments: MS/MSD analyses were performed on sample H35G4. The percent recoveries for the Aroclor MS/MSD analyses were within QC limits, however the relative percent differences (RPDs) for the Aroclor MS/MSD analyses were all outside of QC limits. Since the percent recoveries for all of the samples were well within limits and none of the target compounds were detected in any of the field samples no qualification of the data was made. Summary forms and raw data were evaluated.

7. LABORATORY CONTROL SAMPLE (LCS)

The laboratory control sample (LCS) was prepared and analyzed with every twenty or fewer samples of a similar matrix, or one per sample delivery group (whichever is more frequent). The percent recoveries for the LCS analyses were within QC limits. Summary forms and raw data were evaluated.

AROCLOR: Yes_X_ No____

Comments: None.

8. REGIONAL QUALITY ASSURANCE (QA) AND QUALITY CONTROL (QC)

Regional QA/QC was conducted as initiated by the EPA Region 8.

AROCLOR: Yes___ No_X

Comments: The SDG shows no indication of EPA Region 8 initiating any additional QA / QC.

9. GEL PERMEATION CHROMATOGRAPHY (GPC) PERFORMANCE CHECK

The gel permeation chromatography (GPC) check was performed according to requirements and all spike compounds were within the specified quality control limits.

AROCLOR: Yes_X_ No____

Comments: The GPC calibration appears acceptable based upon review of the two.

10. TARGET COMPOUND IDENTIFICATION

The sample results were reviewed and all compound identifications were acceptable and met method requirements.

AROCLOR: Yes_X_ No____

Comments: No problems with the identification of the sample results were found. All retention times were met for the detected results.

None of the target analyses were identified in any of the samples. The sample extract was not diluted for any of the samples.

11. GAS CHROMATOGRAPH / MASS SPECTROMETOR (GC/MS) CONFIRMATION

GC Confirmation of detected Aroclors has been confirmed.

AROCLOR: Yes___ No_X_

Comments: No targeted Aroclors were detected in any of the field samples; therefore GC/MS confirmation is not required.

12. COMPOUND QUANTITATION AND REPORTED CONTRACT REQUIRED QUANTITATION LIMITS (CRQLs)

The reported quantitative limits and CRQLs are accurate and unqualified

AROCLOR: Yes___ No_X_

Comments: Compound quantitations, as well as CRQLs were adjusted according to the equations provided in the method.

The percent moisture for sample H35G1 was determined to be 73%, which exceeds the 70.0% level, but is less than 90%. The results for this sample are therefore to be qualified as UJ for each of the target analytes.

13. OTHER COMMENTS NOT ADDRESSED ELSEWHERE

1) Page 1 of the Evidence Audit Checklist (EAC) indicates three airbills are associated with this SDG, however documentation is only provided for Airbill Number 3430, which documents the shipment of four packages. The laboratory only documented receipt of two coolers, so it is unclear as to what the other two packages were that were included on the airbill.

ORGANIC DATA QUALITY ASSURANCE REVIEW

Region VIII

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality.

GENERAL QUALIFIERS for use with both INORGANIC and ORGANIC DATA

R	-	Reported value is "rejected." Resampling or reanalysis may be necessary to verify the presence or absence of the compound.
J	-	The associated numerical value is an estimated quantity because the Quality Control criteria were not met.
U J	-	The reported quantitation limit is estimated because Quality Control criteria were not met. Element or compound was not detected.
N J	-	Estimated value of a tentatively identified compound. (Identified with a CAS number.) ORGANICS analysis only.
U	-	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35E5

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764001

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A031,19101109B031

% Moisture: 46. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	61.	U
11104-28-2	Aroclor-1221	61.	U
11141-16-5	Aroclor-1232	61.	U
53469-21-9	Aroclor-1242	61.	U
12672-29-6	Aroclor-1248	61.	U
11097-69-1	Aroclor-1254	61.	U
11096-82-5	Aroclor-1260	61.	U
37324-23-5	Aroclor-1262	61.	U
11100-14-4	Aroclor-1268	61.	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35E6

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764002

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A032,19101109B032

% Moisture: 16. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	39.	U
11104-28-2	Aroclor-1221	39.	U
11141-16-5	Aroclor-1232	39.	U
53469-21-9	Aroclor-1242	39.	U
12672-29-6	Aroclor-1248	39.	U
11097-69-1	Aroclor-1254	39.	U
11096-82-5	Aroclor-1260	39.	U
37324-23-5	Aroclor-1262	39.	U
11100-14-4	Aroclor-1268	39.	U

KsA
1/10/11

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35E7

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764003

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A033,19101109B033

% Moisture: 20. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41.	U
11104-28-2	Aroclor-1221	41.	U
11141-16-5	Aroclor-1232	41.	U
53469-21-9	Aroclor-1242	41.	U
12672-29-6	Aroclor-1248	41.	U
11097-69-1	Aroclor-1254	41.	U
11096-82-5	Aroclor-1260	41.	U
37324-23-5	Aroclor-1262	41.	U
11100-14-4	Aroclor-1268	41.	U

KsA
1/10/11

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EPA SAMPLE NO.

H35E8

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764004

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A034,19101109B034

% Moisture: 33. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49.	U
11104-28-2	Aroclor-1221	49.	U
11141-16-5	Aroclor-1232	49.	U
53469-21-9	Aroclor-1242	49.	U
12672-29-6	Aroclor-1248	49.	U
11097-69-1	Aroclor-1254	49.	U
11096-82-5	Aroclor-1260	49.	U
37324-23-5	Aroclor-1262	49.	U
11100-14-4	Aroclor-1268	49.	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35E9

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764005

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A035,19101109B035

% Moisture: 37. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53.	U
11104-28-2	Aroclor-1221	53.	U
11141-16-5	Aroclor-1232	53.	U
53469-21-9	Aroclor-1242	53.	U
12672-29-6	Aroclor-1248	53.	U
11097-69-1	Aroclor-1254	53.	U
11096-82-5	Aroclor-1260	53.	U
37324-23-5	Aroclor-1262	53.	U
11100-14-4	Aroclor-1268	53.	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35F0

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764006

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A036,19101109B036

% Moisture: 27. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46.	U
11104-28-2	Aroclor-1221	46.	U
11141-16-5	Aroclor-1232	46.	U
53469-21-9	Aroclor-1242	46.	U
12672-29-6	Aroclor-1248	46.	U
11097-69-1	Aroclor-1254	46.	U
11096-82-5	Aroclor-1260	46.	U
37324-23-5	Aroclor-1262	46.	U
11100-14-4	Aroclor-1268	46.	U

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1/10/11

1H - FORM I ARO
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EPA SAMPLE NO.

H35F1

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764007

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A037,19101109B037

% Moisture: 23. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	43.	U
11104-28-2	Aroclor-1221	43.	U
11141-16-5	Aroclor-1232	43.	U
53469-21-9	Aroclor-1242	43.	U
12672-29-6	Aroclor-1248	43.	U
11097-69-1	Aroclor-1254	43.	U
11096-82-5	Aroclor-1260	43.	U
37324-23-5	Aroclor-1262	43.	U
11100-14-4	Aroclor-1268	43.	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35F2

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764008

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A038,19101109B038

% Moisture: 17. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	40.	U
11104-28-2	Aroclor-1221	40.	U
11141-16-5	Aroclor-1232	40.	U
53469-21-9	Aroclor-1242	40.	U
12672-29-6	Aroclor-1248	40.	U
11097-69-1	Aroclor-1254	40.	U
11096-82-5	Aroclor-1260	40.	U
37324-23-5	Aroclor-1262	40.	U
11100-14-4	Aroclor-1268	40.	U

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1/10/11

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35F3

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764009

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A039,19101109B039

% Moisture: 24. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	43.	U
11104-28-2	Aroclor-1221	43.	U
11141-16-5	Aroclor-1232	43.	U
53469-21-9	Aroclor-1242	43.	U
12672-29-6	Aroclor-1248	43.	U
11097-69-1	Aroclor-1254	43.	U
11096-82-5	Aroclor-1260	43.	U
37324-23-5	Aroclor-1262	43.	U
11100-14-4	Aroclor-1268	43.	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H35F4

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40755 Mod. Ref No.: _____ SDG No.: H35E5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030764010

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101109A040,19101109B040

% Moisture: 25. Decanted: (Y/N) N Date Received: 11/03/2010

Extraction: (Type) SONC Date Extracted: 11/04/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/11/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	44.	U
11104-28-2	Aroclor-1221	44.	U
11141-16-5	Aroclor-1232	44.	U
53469-21-9	Aroclor-1242	44.	U
12672-29-6	Aroclor-1248	44.	U
11097-69-1	Aroclor-1254	44.	U
11096-82-5	Aroclor-1260	44.	U
37324-23-5	Aroclor-1262	44.	U
11100-14-4	Aroclor-1268	44.	U

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