FINAL REPORT

AUSJAM GOLD MINE SODIUM CYANIDE REMEDIATION

Submitted to NATIONAL ENVIRONMENT AND PLANNING AGENCY 10 Caledonia Ave Kingston 5



Taking Care of You and Your Environment.

JANUARY 2012

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JANUARY 2012

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1.0 BACKGROUND

AusJam Mining Limited is a gold mining facility located in Main Ridge, Clarendon. This is approximately 4 kilometres west of Pennants or 10 kilometres north-west of Chapleton (Figure 1). Activities on the site have been halted since 2003 but no closure activities were effected.

According to AusJam approximately 10 tonnes of sodium cyanide is currently stored at the facility. The storage of the substance is of concern to the National Environment and Planning Agency (NEPA) as it is a potential threat to public health and a potential environmental hazard. Sodium cyanide is a colourless, highly toxic, corrosive inorganic compound that is mainly used in gold mining operations.

The owners of the site no longer reside in Jamaica. However contact can be made via Mines & Geology Division (MGD), Ministry of Energy & Mining.

On July 10th, 2011 NEPA received a report from the Area 3 Control of the Jamaica Constabulary Force (JCF) concerning a leak from an above ground storage tank existing on the property. Upon receiving the report a multiagency team visited the site to investigate the breaches reported. Based on observations it became a priority that a complete site characterization be undertaken in order to determine the extent of the chemical contamination at the said location.

As an immediate-term action the Agency requires that the leak from the tank be abated and access to the area be restricted.

Further to an emergency meeting called by the Chief Executive Officer of NEPA on July 13th, 2011, a firm of consultants were engaged under emergency powers to support the priority action and longer term remediation of the site (Appendix 1).



Figure 1 Map showing project location

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All measurem unless specific Referenced to coordinates	ents are in meters ed WGS84 UTM
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2.0 APPROACH AND METHODOLOGY

Prior to any treatment, a small containment tank with funnel was used to collect the existing leak, warning signs were placed around the property and 24 hour security personnel posted (Section 4.0).

A meeting was held on Wednesday July 13th, 2011 at the Jamaica Environment Trust (JET) offices with Dr Glen Miller – Natural Resource & Environmental Science (College of Agriculture, Biotechnology and Natural Resources, Reno, Nevada) who happened to be in the island at the time on an unrelated issue with JET. Dr Miller has extensive experience and knowledge as it relates to the mining industry and in cyanide remediation. At this meeting the potential risks involved, sampling required and treatment options were discussed.

After the visit to the gold mine on Thursday July 14th, 2011, it was decided that the cyanide (CN⁻) contained in the processing tanks (a main tank and five smaller thickening tanks (T0-T4) (Plates 1 and 2) of about 250,000 and 5x20,000 litres capacity respectively should be treated with hydrogen peroxide according to the procedure defined in "Treatment technologies for cyanide and related compounds. Part I: cyanide destruction." <u>http://premiu.informine.com/edumine</u>; accessed 7 July, 2011; and confirmed in other documents from the web.

The cyanide degradation reactions are:

 $CN^{-} + H_2O_2 \rightarrow OCN^{-} + H_2O$ $OCN^{-} + 2H_2O \rightarrow NH_4^{+} + CO_3^{2-}$

with the latter reaction occurring slowly after the initial formation of the less toxic cyanate (OCN^{-}) ion. The reaction can be catalysed with Cu^{2+} ions. The pH of the solution should be maintained above 9.2 to ensure HCN is not liberated from the liquor.

A closed loop pumping system was set up to pump liquor (existing solution and added hydrogen peroxide) from the main tank to T0 and from T3 back to the main tank with the liquor moving from T0 through T1 and T2 to T3 under gravity through existing piping, leaving from the surface of one tank and entering at about ³/₄ depth in the subsequent tank. It was found that leaks in the connections between T3 and T4 could not be contained so T4 was left out of the pumping loop. Initial CN⁻ concentrations in tanks T0-T4 were extremely low. (Tables 2, 5 and 6).

The polluted water collected from the containment bund was pumped back into the main tank for treatment. A sump was created to pool contaminated water in the bund and that collected water was also pumped back into the main tank for treatment.

Figure 2 illustrates the layout of the storage tanks and CN⁻ treatment system.



Figure 2 Schematic Layout of Storage Tanks and CN Treatment System

	Notes
	All measurements are in meters unless specified Secondinates Operations Operations Operation conditions: Operation conditions: Flow = 13 remn(3.8 Livec) Fromination CN = 0.05mg/L
9)	Revisions

C.L. ENVIRONMENTAL



Plate 1 Photo showing Main Tank



Plate 2 Photo showing smaller tanks T0, T1, T2, T3 and T4 (out of view)

On July 22nd, 2011, the area with the major leak was welded (Plate 3), however there remained a very slow drip from the valve and some amount of "sweating" around the bolts (Plates 4-5) which at some point will most likely have a major failure and as such the owner should be required to repair it (it might mean emptying the tank). This valve has obviously been giving problems as evidenced by the "G" clamp that is being used with it (Plate 6). The initial treatment (Section 2.2.1) however, was done before this could be effected.



Plate 3 Photo showing where welding occurred



Plate 4 Photo showing leak/drip container



Plate 5 Photo showing minor dripping



Plate 6 Photo showing "G" Clamp on valve

2.1 Quantification/Cyanide Analysis

Cyanide in gold ore processing liquors can be quantified in three forms:

- 1. As free cyanide, i.e. cyanide present as the cyanide anion CN⁻,
- 2. As weak acid dissociable cyanide (WAD) which is the free cyanide plus complexed cyanide that can be liberated as free cyanide by treating the liquor with dilute acid; and
- 3. As total cyanide which is all of the cyanide in the liquor, i.e. that present as free cyanide plus WAD cyanide plus cyanide associated with suspended particles and dissolved metals in the liquor.

Sampling and Sample Treatment procedure

Samples were collected from the tanks at depths of about 20 cm and 0.2 g NaOH was added to maintain the high pH. Samples from liquors which had been treated with peroxide 5 mL of a 0.2 molar solution of sodium arsenite (NaAsO₂) were added to destroy any unreacted peroxide. All samples were stored on ice until delivered to the analytical laboratory.

Three laboratories were used in an attempt to assess the quality of the data. On some occasions co-located samples (samples taken within a minute of each other from approximately the same position within the same tank) were submitted to the laboratories without them knowing they were sampling duplicates (to laboratory 1 on 19th July from T1 and the 21st July 2011 from T2; 5.30 pm); to laboratory 3 on 25th July 2011 (3 samples from the main tank)). In addition on the 21st and 25th of July 2011 co-located samples were submitted to more than one laboratories.

2.1.1 Probable Initial Cyanide Concentrations

Liquor samples collected by NEPA personnel from the liquor leaking from the main tank and from one of the smaller tanks had been analysed by the Mines and Geology (MGD) laboratory. It was reported that the concentration in the leaking liquor was 400 mgCN/L and in the smaller tanks was 1.7 mgCN/L. It was assumed the analyses were for total cyanide. The pH of the liquor in the main tank was reported to be approximately 9.8. Formal analytical reports were not available at the time.

NEPA's NaCN inventory for the mine suggested that 1000 kg of NaCN was not accounted for but the mine owner indicated that approximately 600 kg of that NaCN had been used during normal plant operation and that the remaining 400 kg NaCN had been dumped into the main tank after the bag containing it was ruptured (about 2 years ago).

If 1000 kg NaCN had been dumped into the 250,000 L main tank then the expected CN⁻ concentration would be (total cyanide):

 $[1000 (kg) \ge 1000 (g/kg) \ge (26/49 (CN/NaCN)) / 250,000 (L) \ge 1000 (mg/g)] mg CN/L (ppm) = 2,100 ppm.$

If only 400 kg NaCN had been dumped then the concentration would be 40% of that, i.e. 840 ppm (total cyanide). Both calculations assume no degradation of the CN⁻ over the two years since the NaCN had been dumped into the main tank.

Given these numbers and that some degradation would have occurred, the concentration in the leaking liquor reported by MGD seemed reasonable. Upon further investigation, it was found

that there was sludge in the bottom of the tank which could well contain high concentrations of CN^- and that that CN^- could be leached from the sediment during the treatment process (note also that this means that the volume of liquor in the main tank would be less than 250,000 L; see below for a more accurate estimate of the actual liquor volume). It was decided therefore to treat the liquor as though it was 600 ppm.

Samples were sent for separate independent analysis and experiments designed and carried out to estimate amenable CN^{-} based on use of H_2O_2 . Initial treatment was designed and H_2O_2 requirement estimated without further analytical data due to the urgency of the situation and the arrangement in place for release of data.

2.2 Hydrogen Peroxide (H₂O₂) Requirement

The stoichiometric amount of H_2O_2 required is 1.3 kg peroxide per kg of CN⁻. The treatment process calls for using 2-8 kg H_2O_2 per kg CN⁻. It was decided to use an approximately four fold excess of H_2O_2 (ie. 5 kg H_2O_2 per kg CN⁻) and to monitor the CN⁻ concentration after each addition exercise.

At 600 ppm CN^{-} in 250,000 L the mass of H_2O_2 required would be 750 kg. The peroxide came as 50% peroxide in 228 kg drums (114 kg H_2O_2) so at this dosage rate approximately 7 drums of peroxide would be required.

2.2.1 Initial Series of Addition of H_2O_2

Since efficient mixing of the treatment chemical into the CN^{-} solution is an essential feature of the treatment process it was decided that the liquor contained in the tanks should be pumped around them and the H₂O₂ added slowly to one of the smaller tanks. The pumping process was arranged to be put in place and for the integrity of the smaller tanks to be tested prior to the start of pumping. It was found that leaks in the connections between T3 and T4 could not be contained so T4 was left out of the pumping loop. The pumping system was set up to pump liquor from the main tank to T0 and from T3 back to the main tank with the liquor moving from T0 through T1 and T2 to T3 under gravity through existing piping, leaving from the surface of one tank and entering at about ³/₄ depth in the subsequent tank. The process of rehabilitating the mixers on the tanks, electrical supply wiring and plumbing work was completed on Monday July 18th, 2011.

Once pumping started the amount of liquor in the main tank dropped by about 25%. The smaller tanks, however, were only partly full to start with which lead to the leak almost stopping.

On Monday July 18th, 2011 liquor samples were taken for analysis from the small tailings lake (Plates 7-8), the entombed spring water, small tanks T2 and T3, the main tank and the small tank that had been placed under the leak in the main tank. In addition a sample of liquor collected from the leak in the main tank was treated with peroxide under laboratory conditions to test the treatment process. One litre batches of liquor expected to contain approximately 600 mg CN⁻ each were treated with peroxide as indicated in Table 1. The field and laboratory samples were submitted for total CN⁻ analyses on the morning of Tuesday July 19th, 2011.



Plate 7 Photo showing tailing pond/lake 1



Plate 8 Photo showing tailing pond/lake 2

Table 1 La	aboratory scale treatment of C	CN- contaminated liquor	(volume of liquor us	ed = 1L; assumed
cyanide co	oncentration 600 mg/L).			

Initial Mass peroxide added	Mass of CuSO ₄ . 5H ₂ O	Hours of reaction time	Additional mass of peroxide added	Total hours of reaction time	Found [CN]* mgCN/L
0	0	0	0	0	225
2500 mg	0	2		2	448
2500 mg	0	2	1000 mg	16	2000
1500 mg	0	2		2	1075
1500 mg	0	2	1000 mg	16	545
500 mg	0	2		2	34.75
500 mg	0	2	1000 mg	16	515
1500 mg		2		2	998
1500 mg		2	1000 mg	16	1500

* Free CN: the results did not become available until after the planned treatment had been completed.

Early on Tuesday July 19th, the liquor that was in the containment bund under the processing tanks (presumably from rain water and the leak prior to that being caught in the small tank placed under the leak) was pumped back into the main tank and the soil in the area turned over and left to dry in the sun; a process that should allow for any cyanide in the soil to be degraded under the sun's radiation.

A trial addition of H_2O_2 to the Ausjam tanks was conducted on Tuesday July 19th over a 2.5 hour period. Liquor from the main tank was pumped to the thickening tanks and allowed to circulate throughout the system for two hours before the peroxide addition began. The liquor circulation rate was measured to be 13 L/sec giving a "liquor in small-tank" residence time of approximately 30 minutes. The H_2O_2 was added slowly from 20 L plastic containers to the liquor in T0 at the point where it flowed from T0 into T1 (Plate 9). The peroxide addition rate for the 5:1 H_2O_2 :CN treatment of the liquor in a thickener tank therefore needed to be (0.6 (g/L) x 1kg/1000 g x 20,000 L x 5 =) 60 kg H_2O_2 in 30 minutes; i.e. approximately 120 litres of 50% peroxide in 30 minutes. The initial procedure used proved to be more tedious and energy demanding than anticipated and only 60 litres were added over the 2.5 hour period (i.e. half the volume and 5 times longer than planned and so the treatment was at 0.5:1 rather than 5:1 H_2O_2 :CN⁻).

The pH of the liquor in T1 was monitored using a calibrated Hydrolab MS-5 multiprobe meter (Calibration certificate in Appendix 2) and remained at about 9.9 throughout the addition period. Liquor samples were collected on July 19th, from T0, T1, T2 and T3 at the end of the addition period and submitted to the analytical laboratory at 9.30 am the following morning. It was hoped that the data would be available on the evening of Wednesday July 20th, but they were not. No additional treatment was carried on July 20, in anticipation of the analytical results becoming available to permit optimizing of the process on Thursday July 21st.



Plate 9 Photo showing initial H₂O₂ addition process (July 19, 2011)

The peroxide addition was continued on Thursday July 21st, 2011 after modifying the addition procedure to include use of a larger dispensing container (50 L) and to allow easy regulation and estimation of the flow rate. This container was positioned above the T0 exit point and filled from the previously mentioned 20 litre containers (Plate 10). This addition (along with the erection of a canopy above the addition point) allowed for a more controlled and easily operated system. In the absence of analytical data from the laboratory experiments and the trial treatment the initial treatment plan was continued. An initial sample was collected from T0 and then the liquor circulation started. The peroxide addition began one hour after the start of the circulation and over a seven hour period, 228 kg of H₂O₂ was added (two drums of 50% H₂O₂). Samples were collected from T0, T1 and T2 at the end of the treatment on July 21st, 2011 and submitted to the laboratory at 9.00am on the morning of Friday July 22nd, 2011. The pH in T1, monitored throughout the day, slowly drifted down from 9.9 to about 9.5 and so 500 g NaOH was added to T0 to increase the pH. Approximately 100 g CuSO₄.5H₂O was added to T3 with the expectation that this could catalyse the continuing reaction. By the end of the day, a total of approximately 250 kg of H_2O_2 had been added; i.e. approximately a 1.7:1 H_2O_2 .CN.



Plate 10 Photo showing subsequent H₂O₂ addition process (July 21, 2011)

By the evening of Thursday July 21st, 2011, the main tank had stopped leaking and a decision was taken to weld over the hole. This was successfully done on the morning Friday July 22nd, 2011 but liquor started to slowly seep from a joint in the pipe below the original leak. The repair can therefore only be considered to be temporary.

The peroxide treatment was continued on Friday July 22^{nd} , 2011 with still no analytical data to guide the process. The peroxide addition began after about one hour of pumping with three drums of H_2O_2 being were added over a six hour period (by the end of Friday a total of 570 kg of H_2O_2 had been added, or approximately 4:1 H_2O_2 :CN, based on the initial calculations).

Pumping was continued for about 30 minutes after the completion of the addition. The pH gradually decreased from 9.9 to 9.7 over the addition period. Approximately 500 g NaOH was added to T0 towards the end of the addition period to raise the pH. The system was left to stand until Monday July 25th when another set of samples were taken for analysis.

2.2.2 Final Addition Process of H_2O_2

After reviewing the July 25th, 2011 data (see Table 2) and consultations with NEPA, it was decided that a further treatment was required. On August 9th, 2011, a further two, 228 kg drums of 50% peroxide were added over an eight hour period. The liquor circulation pattern was altered such that the liquor in the small tanks was not mixed with the main tank liquor (liquor was pumped from T3 to T0 and then flowed by gravity from T0 to T1, T2 and T3) while the main tank liquor was pumped from a point close to the sediment surface and discharged to three other well separated points within the main tank, one at the liquor surface, the other two at close to the sediment surfaces in T0 and the main tank were not very effective as the sediment was well compacted.

Eighty litres (2/3 of a drum; 75 kg H_2O_2) of peroxide was added to T0 over a 4 hour period as detailed above. One hundred and forty litres (1¹/₃ drums; 125 kg H_2O_2) were added to the main tank over a six hour period; additions were made at several points in the tank using the same addition technique as for the small tanks.

Samples for analysis were collected prior to agitating the liquor, after 2 hours of circulation, at the end of the day's treatment, and again on September 2^{nd} , 2011.

A final sampling run was conducted on October 13th, 2011, whereby tests for gold and silver were conducted in addition to total and free cyanide.

All detailed laboratory results and test methods can be seen in Appendix 3.

3.0 RESULTS AND OBSERVATIONS

3.1 Observations during H₂O₂ addition

Initially the liquor was reddish-brown with some suspended solids. Once pumping started the amount of suspended solids increased slightly. After about an hour of adding H_2O_2 a surface coating of foam started to form on the liquor in T1. The amount of foam gradually increased to a height of about 10-15 cm, even higher if the addition rate was faster. The gas emerging from the liquor could have been oxygen (due to the disproportionation of the peroxide $(2H_2O_2 \rightarrow 2 H_2O + O_2)$, NH₃ from the cyanate hydrolysis reaction $(NH_4^+ + OH^- \rightarrow NH_3 + H_2O)$; see above) or HCN ($CN^- + H^+ \rightarrow HCN$) which can be produced if the pH drops below about 8.5. Care was therefore taken to minimize foaming by keeping the peroxide addition rate slow. The pH was also carefully monitored and was occasionally adjusted through addition of NaOH.

After three drums of peroxide had been added (about midday on Friday July 22nd, 2011) there was minimal foam forming and little or no evidence of reactions occurring. When the addition rate was increased a light coloured precipitate seemed to form at the addition point; possibly metal oxides precipitating in the basic conditions once the cyanide initially coordinated to the metals was destroyed.

By the end of the peroxide addition the liquor was a muddy brown colour with high levels of suspended solids, perhaps due to increased circulation rate.

When samples were collected on Monday July 25^{th} , 2011 it was determined that the sediment level in the main tank was approximately a third of the height of the tank and so the liquor volume in the system was therefore only about $2/3^{\text{rd}}$ of the initially predicted 250,000 L; meaning that the H₂O₂:CN weight ratio used to date was almost 6:1.

3.2 Sampling Results (pre, during, and post H₂O₂ addition)

The concentrations of cyanide in the samples (1 L) collected before, during and after treatment with H_2O_2 are presented in Table 2.

There was poor agreement between the total CN^{-} results reported by different laboratories for colocated samples. In some instances there were also major differences between the concentrations reported for similar samples when analysed by the same laboratory. For example, the CN^{-} concentration of a sample collected from the leak on 11^{th} July, 2011 was verbally reported as 400 mgCN/L but the analytical result for a sample collected from the same leak a week later (18 July, 2011) and analysed by laboratory 1 was approximately five times higher (1,980 mgCN/L). AUSJAM GOLD MINE 18 CL ENVIRONMENTAL SODIUM CYANIDE REMEDIATION Subsequently, laboratory 1 withdrew that result and reported that the concentration was in fact 2500 mgCN/L. The difference between the laboratories may have been due to changes over the time between the sampling exercises. The concentrations reported by laboratories 1 and 2 for co-located samples collected on 21st July, 2011 also differ considerably (2,500 vs 1,500 and 35/350 vs 2,000 mgCN/L). The results from laboratories 1 and 3 for co-located samples collected from the main tank on July 25th, 2011 also differ (175 vs 30-40 mgCN/L) but for laboratory 3 there is good internal agreement (32, 43, 42 mgCN/L). For co-located samples, Laboratory 1 reports very different concentrations for samples from T2 on July 21st, 2011 but the agreement between samples from T1 on July 19th, 2011 is reasonable.

The analytical results from the laboratory based tests are from Laboratory 1. These results are difficult to accept as they suggest that the peroxide treatment process frequently led to an increase in CN^{-} concentration (from 225 mgCN/L in the initial solution; again this result is very different from the July 18, 2011 result of 775 mgCN/L), that the 500 mg treatment (approximately 1:1 H₂O₂:CN) was more effective than when excess peroxide was added and that the 16 hour treatments were less effective than the 2 hour treatments. Laboratory 1's poor internal agreement (co-located samples and unlikely data from the laboratory tests) and poor agreement with the other laboratories suggest that their data are unreliable and so have not been considered further.

	July	July										
Sample Date	11th	18th	July 1	.9th	July 21st				July 25th			
Sample Time		4:30pm	5:00	pm	10:00am	5:30pm			8:00am			
Lab#	2	1	1	1	1	1	1	2	1	3	3	3
<u>Location</u>		Total CN (mg/l)										
Main Tank		775							175	32	43	42
Tank TO			223		300	2500		1500				
Tank T1			123	183		300				40		
Tank T2		1	82.5			35	350	2000				
Tank T3		0.33	21.25							31		
leak												
container	400*	1980										

 Table 2 Total Cyanide analysis results (July 11, 18, 19, 21 and 25, 2011)

* the verbally reported concentration from the July 11th sampling exercise.

Laboratory 3 is certified by the USA National Environmental Laboratory Accreditation Conference (NELAC) to have in place a quality management system. In addition, they supplied quality control data that showed that they gained good agreement when they analysed blanks (both not detectable), laboratory control samples (0.346 vs 0.344; 17.3 vs 17.8; 0.346 vs 0.375 mgCN/L) and matrix-spiked samples (a known amount of CN^{-} added to a submitted sample: 11.7

vs 11.8; 11.7 vs 11.2 mgCN/L). Their results also showed good agreement for blind co-located samples (i.e. they did not know they were sampling duplicates) submitted to them (Table 3). The interpretation of the effectiveness of the peroxide treatment is therefore based on the results from laboratory 3. Neither of the other laboratories (lab 1 and 2) supplied quality control data.

Unfortunately there were no results available from any laboratory to guide us during the first three days of treatment. The results from the July 25^{th} , 2011 sampling after the addition of five 228 kg containers of 50% hydrogen peroxide (approximately 6:1 H₂O₂:CN given the liquor volume adjusted for the sediment volume) show that the concentrations in all tanks were approximately the same (30-40 mgCN/L) and at least ten times less than the initially thought concentration (400 mgCN/L) and fifty times less than the more probable 2,000 mgCN/L.

The samples collected on July 25th, 2011, which included some sediment (main tank) and soils (surrounding area), were analysed (laboratory 3) for other parameters in addition to CN (Table 3).

The liquor temperature (Temp), conductivity (Cond), pH, dissolved oxygen (DO), turbidity (Turb) and total dissolved solids (TDS) were determined at the time of sampling using a Hydrolab MS-5 water quality probe. These data show that the conductivity and therefore the dissolved solids (TDS is calculated from conductivity) is high (tap water is normally about 0.5 mS/cm) as expected given the sodium and other ions present in the liquor. The pH remained high during the treatment, the DO remained super-saturated (ambient water is normally about 8 mg/L) over the 3 days following the treatment and the high turbidity indicates the presence of suspended solids.

Total Petroleum Hydrocarbons (TPH) were not detected in either the liquor or the solids. The concentrations of the metals in the liquor were lower than the NEPA trade effluent standard except for copper (standard 0.1 mg/L) which would meet the standard with a 10-fold dilution.

The concentrations of CN⁻ in all but tailing pond 1 (now returned to pasture land) are elevated, particularly in the main tank sediment from which it could be released back into the liquor in the tank. Concentrations of the metals in the solids are all very low compared to the concentrations in Jamaican soils (As – average 25, range 1.4 - 203, 95% < 64.9 mg/kg; Cd – average 20, range 0.2 - 409, 95% < 77.6 mg/kg;; Cu – average 203, range14 - 657, 95% < 229 mg/kg Hg – average 0.2, range 0.04 - 0.83, 95% < 0.46 mg/kg; Pb - average 46.5, range 6 - 897, 95% < 90 mg/kg; Zn - . average 203, range 54 - 936, 95% < 513 mg/kg) A geochemical Atlas of Jamaica, Centre for Nuclear Sciences, UWI, 1995, Canoe Press).

LOCATION	DEPTH (m)	TEMP (oC)	COND (mS/cm)	SAL (ppt)	PH	D.O. (mg/l)	TURB (NTU)	TDS (g/l)	Total Cyanide (mg/l)	TPH (mg/l)	Arsenic (mg/l)	Cadmium (mg/l)	Mercury (mg/l)	Lead(mg/l)	Zinc(mg/l)	Copper(mg/l)
Main Tank 1	surface	26.28	2.74	1.48	9.86	27.35	661	1.75	32	ND	0.013	ND	ND	0.025	0.11	0.38
	1m	26.53	2.74	1.48	9.86	27.36	637	1.75								
Main Tank 2	surface	26.56	2.73	1.48	9.86	26.2	686	1.752	43	ND	0.013	ND	ND	0.026	0.11	0.52
	1m	26.62	2.747	1.48	9.84	23.28	715	1.752								
Main Tank 3	surface	27.23	2.729	1.47	9.9	27.58	655	1.756	42	ND	0.011	ND	ND	0.025	0.077	0.4
	1m	26.61	2.743	1.48	9.84	26.63	694	1.756								
Tank T1	surface	27.27	2.74	1.48	9.89	26.84	681	1.76	40	ND	0.013	ND	ND	0.029	0.1	0.94
	1m	27.31	2.75	1.48	9.89	20.74	695	1.76								
	2m	27.29	2.75	1.48	9.89	20.16	656	1.76								
	3m	27.28	2.75	1.48	9.88	19.57	668	1.76								
Tank T3	surface	27.31	2.74	1.48	9.89	26.99	699	1.75	31	ND	0.013	ND	0.00023	0.029	0.12	0.55
	1m	27.34	2.75	1.48	9.86	25.19	746	1.75								
	2m	27.34	2.74	1.48	9.84	24.24	699	1.75								
	3m	27.3	2.75	1.48	9.87	23.82	744	1.76								
	4m	27.19	2.74	1.48	9.9	24	723	1.764								
Tailing Pond 1	surface	26.82	0.26	0.12	8.64	4.86	35.3	0.167	0.024	ND	ND	ND	ND	ND	ND	ND
Tailing Pond 2	surface	26.7	0.245	0.12	8.34	7.41	102.8	0.158	0.0079	ND	ND	ND	ND	ND	ND	ND
River above property	surface	23.73	0.278	0.13	8.48	8.68	26.1	0.178	ND	ND	ND	ND	ND	ND	ND	ND
River below property	surface	23.86	0.285	0.14	8.46	8.85	26	0.182	ND	ND	ND	ND	ND	ND	ND	ND
Entombed Spring	surface	23.84	0.605	0.31	8	7.03	31.7	0.3871	0.043	ND	ND	ND	ND	ND	ND	ND
Blind duplicate of Main Tank 1	surface								40	ND	0.013	ND	0.00025	0.027	0.12	0.5
Soils/Sediment									Total Cyanide (mg/kg)	TPH(mg/kg)	Arsenic(mg/kg)	Cadmium(mg/kg)	Mercury(mg/kg)	Lead(mg/kg)		
Containment Bund									23	ND	2.7	0.75	0.1	11		
Tailing Pond 1									ND	ND	4.7	ND	0.17	8.2		
Tailing Pond 2									8	ND	2.2	0.66	0.16	6.2		
Main Tank									170	ND	3	2.6	0.11	34		
Repaired Bund Wall									7.9	43	2.7	ND	0.22	5.9		
ND - None Detected																

 Table 3 Detailed Results from July 25th, 2011 sampling exercise

3.3 Sampling results after Final Treatment

Post-final treatment data show that the concentrations (total cyanide) decreased by a factor of approximately 2 (main tank) to 3 (small tanks) during the final treatment (Table 4). The results also showed that cyanide present as free cyanide is about 20-30% of the total cyanide and that there was minimal change in the concentrations over the August 9th to September 2nd, 2011 holding period (as was found for the July 25th to August 9th, 2011 period also: Table 4). On all occasions the liquors were super-saturated in oxygen at the end of a day's peroxide treatment but on September 2nd, 2011 there was no detectable oxygen in the liquor (Table 5). This suggests that oxidation of the cyanide had completely depleted all the oxygen and the degradation reaction would have ceased or been very slow and would remain so until air was efficiently mixed into the system (agitation or increase in liquor surface area).

This final treatment (approximately $30:1 \text{ H}_2\text{O}_2:\text{CN}^-$) although not reducing the CN⁻ concentration to almost zero as expected, did further reduce the concentrations to well below the European "discharge to tailing lake" standard of 50 mgCN/L as WAD cyanide (WAD is a component of total CN; *Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006. Official Journal of the European Union, 2006).* The NEPA "effluent discharge" standard of 0.2 mg CN(total)/L and 0.1 mgCN(free)/L could also be met by discharging from the tanks with a 100-fold, or higher, dilution.

This final treatment mission was more effective in the T0-T3 tanks with limited cyanide dissolution from the coarse sediments in T0. The concentrations in the T0 to T3 tanks were reduced to 7 mg/l from previous levels of 17 to 24 mg/l, by the final addition of peroxide. This represents a 60 to 70% reduction after the addition of 80 litres of peroxide. Theoretically this should have been reduced to zero, assuming no sediment to liquid phase interaction. This reduction was however in addition to a previous reduction from 31 - 40 mg/l to 17 and 24 mg/l over a 14 day period. This 30% to 60% reduction over a 2 week period is believed to be due to the continued oxidation of the cyanide due to high residual oxygen levels (after the 1st treatment mission) and to a limited extent photolytic destruction. Estimation of the time it would take for gradual compliance of T0-T3 with direct discharge standards was undertaken using the observed rates of reduction applied on a fortnightly interval. It is estimated that it would take 8 to 9 fortnights (~4 months) for complete compliance by allowing natural degradation to occur.

Sample Date	J	uly 25t	h		August 9th			September 2nd					
Sample Time	8:00am			8:30am	10:30am	5:00)pm	10:00am					
<u>Location</u>	Total CN (mg/l)			Т	Total CN(mg/l)					g/l)	Free	CN(mį	g/I)
Main Tank	32	43	42	29	44	17	20	20	18	22	3	4.3	3.2
Tank TO				44	24			12			3.1		
Tank T1	40							13			3.9		
Tank T2				31	17	7.2		14			2.9		
Tank T3	31							8			3.7		
Tank T4								0.14			0.05		

Table 4 Total and Free Cyanide Results during (July 25, 2011) and after (Aug 9, Sept 2, 2011) treatment

Table 5 shows detailed results from the September 2nd sampling exercise.

LOCATION	DEPTH (m)	TEMP (oC)	COND (mS/cm)	SAL (ppt)	PH	D.O. (mg/l)	TURB (NTU)	TDS (g/l)	Total Cyanide (mg/l)	Free Cyanide (mg/l)
Tank T0	surface	27.06	2.591	1.4	9.81	0.35	628	1.66	12	3.1
	1m	26.97	2.592	1.4	9.82	0.18	638	1.659		
	2m	26.92	2.592	1.39	9.82	0.13	642	1.659		
	3m	26.72	2.59	1.39	9.84	0.11	648	1.658		
Tank T1	surface	26.83	2.604	1.4	9.92	0.92	605	1.668	13	3.9
	1m	26.49	2.609	1.4	9.9	0.28	630	1.669		
	2m	26.45	2.606	1.4	9.88	0.16	631	1.669		
	3m	26.06	2.602	1.4	9.91	0.11	640	1.665		
Tank T2	surface	26.7	2.624	1.42	10.07	1.19	600	1.6	14	2.9
	1m	26.49	2.619	1.41	9.98	0.43	605	1.67		
	2m	26.36	2.615	1.41	9.93	0.25	610	1.674		
	3m	26.18	2.613	1.41	9.93	0.2	611	1.67		
Tank T3	surface	26.58	2.631	1.42	10	1	555	1.681	8	3.7
	1m	26.59	2.625	1.41	9.96	0.49	584	1.679		
	2m	26.29	2.624	1.41	9.93	0.26	605	1.679		
	3m	26.25	2.62	1.41	9.91	0.16	598	1.679		
Tank T4	surface	26.24	0.357	1.8	9.38	3.42	72.3	0.228	0.14	0.05
Main Tank point 1	surface	25.91	2.501	1.34	9.8	0.74	457	1.592	20	3
	1m	25.39	2.51	1.35	9.79	0.3	455	1.6		
Main Tank point 2	surface	26.41	2.53	1.35	9.83	0.73	462	1.619	18	4.3
	1m	26.25	2.55	1.36	9.82	0.47	470	1.611		
Main Tank point 3	surface	26	2.52	1.36	10.02	1.9	478	1.611	22	3.2
	1m	26.83	2.515	1.36	9.89	0.96	472	1.61		
ND - None Detected										

 Table 5 Detailed results from September 2nd, 2011 sampling exercise

Table 6 shows detailed results from the October 13th, 2011 sampling exercise.

Results were very similar to that of the September 2nd, 2011 sampling exercise. Minor traces of gold and silver were also detected in the tanks.

LOCATION	DEPTH (m)	TEMP (oC)	COND (mS/cm)	SAL (ppt)	PH	D.O. (mg/l)	TURB (NTU)	TDS (g/l)	Total Cyanide (mg/l)	Free Cyanide (mg/l)	Gold (mg/l)	Silver (mg/l)
Tank TO	surface	28.56	2.55	1.37	10.06	0.93	303.2	1.626	15	0.99	0.162	0.014
	1m	27.11	2.54	1.37	10.13	0.26	305.1	1.625				
	2m	26.84	2.54	1.37	10.15	0.18	310.3	1.626				
	3m	26.49	2.537	1.36	10.15	0.12	309.7	1.622				
Tank T1	surface	27.09	2.537	1.36	10.2	0.67	316.8	1.622	18	1.1	0.197	0.023
	1m	25.47	2.533	1.36	10.17	0.37	324.7	1.62				
	2m	26.17	2.529	1.36	10.17	0.22	325	1.617				
	3m	25.87	2.521	1.36	10.17	0.14	328.4	1.614				
Tank T2	surface	26.76	2.542	1.37	10.22	1.7	328.5	1.626	15	1.3	0.152	0.018
	1m	26.58	2.539	1.37	10.19	0.64	326.1	1.625				
	2m	26.18	2.536	1.36	10.18	0.34	328.8	1.622				
	3m	25.66	2.531	1.36	10.18	0.19	327	1.62				
Tank T3	surface	26.76	2.573	1.38	10.2	1.44	331	1.646	16	0.95	0.174	0.023
	1m	26.54	2.571	1.38	10.19	0.63	332.1	1.646				
	2m	26.33	2.567	1.38	10.19	0.35	331.4	1.645				
	3m	25.95	2.563	1.39	10.19	0.23	331.1	1.641				
Tank T4	surface	25.26	0.277	0.13	9.5	5.32	131.4	0.1768	0.32	0.078	0.00511	ND
Main Tank point 1	surface	25.29	2.394	1.29	10.22	2.82	249.6	1.533	19	2.1	0.107	0.025
	1m	24.69	2.453	1.32	10.15	0.51	262.3	1.565				
Main Tank point 2	surface	26.02	2.395	1.28	10.15	2.74	238.5	1.529	23	1.8	0.104	0.022
	1m	24.78	2.44	1.31	10.13	0.77	253.1	1.563				
Main Tank point 3	surface	25.7	2.39	1.29	10.14	3.01	317.1	1.52	14	0.93	0.113	0.025
	1m	24.8	2.44	1.31	10.13	0.88	311	1.56				
ND - None Detected												

Table 6 Detailed results from October 13th sampling exercise

3.4 Disposal of Container with Sodium Cyanide pellets

Upon request by NEPA to remove the container with sodium cyanide to a safe and secure location at the Petroleum Corporation of Jamaica, an inspection was conducted on July 19^{th} , 2011 on the outside of the container as access was restricted due to the container being padlocked. The container was a 20 foot container in good condition, with no observed breach of the structure . It was raised off the ground to prevent it from being flooded and is surrounded by a concrete wall (Plates 11-12). We were informed by the caretaker Mr Vinton James, that 8 - 9 tonnes of sodium cyanide pellets in see-through, sealed bags stored in plywood containers on pallets were inside the container.

The storage of sodium cyanide in this way does not pose an immediate health risk unless the packaging is interfered with by unauthorized persons.

The transportation of the container to Petrojam was cancelled due to the reluctance of Petrojam to accept it.



Plate 11 Photo showing padlocked container with sodium cyanide pellets



Plate 12 Photo showing container with sodium cyanide pellets surrounded by concrete wall

4.0 SITE PHOTOS



Plate 13 Photo showing warning signs on property



Plate 14 Photo showing warning signs on property

AUSJAM GOLD MINE SODIUM CYANIDE REMEDIATION CL ENVIRONMENTAL



Plate 15 Photo showing sampling of main tank



Plate 16 Photo showing sampling of main tank



Plate 17 Photo showing containment bund area being cleared



Plate 18 Photo showing sampling of Tank T1



Plate 19 Photo showing section of Rio Minho at base of AusJam property



Plate 20 Photo showing sampling of Rio Minho

5.0 CONCLUSIONS AND RECOMMENDATIONS

1. In light of:

a.) the lack of presence of security, responsible personnel or an operator at the site,

b.) the risk from consumption and exposure (although reduced) to persons and animals which use and traverse the site, and

c.) possibilities of structural and mechanical failure of the tanks and valves and the inadequacy of the bunds surrounding the facility;

We recommend an immediate resolution of the associated threat by dilution of the liquor by a factor of 200 (using the spring water) and discharge to the tailing ponds for storage. The resulting concentration would be less than 0.2 mg/l, and will further allow for natural decay of the CN^{-} . This is well within international guidelines for discharge to tailing ponds at 50 mg/l for new facilities.

Capacity determination of both tailing ponds has shown that the preferred and most ideal scenario is that of discharge to a combination of Tailing Ponds one and two plus dilution by a factor of 43. This scenario will have an overflowing volume of 4,663 cubic meters of water with a concentration of 0.19mg/l CN after a 5 year return period rainfall event. This is below the level acceptable to enter the environment. During dry conditions this scenario will not overflow and have a concentration level of 0.3mg/l CN, marginally above the acceptable standard. The structural integrity of the slopes of both ponds is quite sound, especially Tailing Pond 1 where there are no signs of erosion. There is a small area of eroded sediments in Tailing Pond 2; however it is quite effective for the disposal of the cyanide.

2. Should the first recommendation not be taken, then, we recommend:

a.) Monitoring both sets of tanks (Main Tank and T0/T3) for Cyanide at a fortnightly interval for the next 6 months.

b.) With respect to the isolated T0/T3 tanks:

Allow for natural degradation to levels of 0.2 mg/l CN⁻ of the contents of T0/T3 (which are cumulatively approximately 100 cubic metres of liquid content) by discharging to the tailing lakes. We anticipate that this will take 3 months to occur naturally.

c.) With respect to the Main tank, after the liquors in tanks T0 to T3 are completely treated and have been discharged:

i.) discharge the content (approximately 70.5 cubic metres) to the T0/T3 tanks, treat as required, monitor, store and confirm CN^{-} levels have reached 0.2 mg/l CN^{-} , and then discharge to the tailing lake. We anticipate that this will take 3 months to occur.
3. With respect to the cyanide pellets stored in the 20 foot container on site, we recommend that an external secured facility be utilized for storage until the mine re-opens. Given that the mining site is remote, thus allowing time for undoing any reasonable temporary securing option, and that re-opening is uncertain, concrete entombing is not recommended.

4. Based on the laboratory results and the protracted delivery of results by laboratories 1 and 2 (both local) and questionable results of at least one laboratory, we recommend that institutional strengthen of local laboratories that test for cyanide be conducted. This should involve standardized analysis and reporting. The mining company should have identified an appropriate lab as part of their emergency operating procedure.

5. Industrial facilities that use large volumes of cyanide should be required to have a limited amounted of peroxide on site and have mutual agreements with peroxide providers/manufacturers such as Federated Pharmaceutical to have ready access to treatment amounts to be used in the event of an accident.

6. The Government needs to revisit the value of the Bond that is required to be put down by companies that use hazardous materials in their process. The value has to take into consideration the cost of remediation in the event that there is an accident. The market value, inflation rates and the operation lifetime of the facility must be taken into consideration in arriving at a value.

7. Ensure that all facilities that use or produce hazardous material detail their modus operandi in their Emergency Response Plans. Emergency Response Plans should be requested from facilities that were in existence before the NRCA Act as a requirement for public safety.

8. The installation of weather stations should be mandated as part of the Permitting process of facilities that deal with hazardous materials especially when they are located in populated areas. At a minimum these weather stations should record temperature, relative humidity, wind speed and direction, rainfall and atmospheric pressure. This will help in determining the direction in which it would travel and location of maximum concentrations if it is a gas (air dispersion modelling) and in the case of solids or liquids the probability that it will be washed into drainage channels etc.

APPENDICES

Appendix 1 Study Team

1. C.L. ENVIRONMENTAL CO. LTD.

- i. Mr. Carlton Campbell; M.Phil., CIEC
- ii. Mr. Matthew Lee; M.Sc.
- iii. Mr. Kristoffer Lue; B.Sc.
- iv. Miss Rachel D'Silva; B.Sc.
- v. Mr. Glen Patrick

2. CEAC SOLUTIONS LTD.

- i. Mr. Christopher Burgess; M.Sc., PE
- ii. Mr. Carlnenus Johnson
- iii. Mr. Marc Henry

3. UNIVERSITY OF THE WEST INDIES

- i. Dr. Anthony Greenaway
- ii. Dr. Michael Coley

4. BACCHUS ENGINEERING

- i. Mr. Robert Bacchus
- ii. Mr. Michael Bacchus

Appendix 2 Hydrolab MS-5 Calibration Certificate

	HACH
c c	Certificate of Instrument Performance
	Company Name: <u>CL ENVIRONMENTAL</u>
Pa	art/Model Number: MiniSonde 5 Serial Number: 49186
REC CON (One m	X Within Tolerance VDITION: Within Tolerance but Limited (*see service report) must be checked) Out of Tolerance (*see service report)
RET CON (One m	URNED X Within Tolerance NDITION: Within Tolerance but Limited (*see service report)
Test I and a C	Equipment Used, (ID#): N.I.S.T traceable glass thermometer (H-B Thermometer, Serial <u>2Z9208)</u> cole-Parmer " <i>PolyStat</i> " Constant Temperature Circulator
Enviro	Demental Conditions: Instrument Reading: 10.03 °C Error .03 °C 20 °C 20.01 °C .01 °C 30 °C 29.99 °C .01 °C
Hach C Service are cali Where s above in user mu	Company does hereby certify that the above listed equipment meets or exceeds all Manufacturers' Specifications (unless limited conditions apply). Test equipment used for performance verification ibrated using standards traceable to the National Institute of Standards and Technology (NIST). such standards do not exist, the basis for calibration is documented. The proper operation of the instrument was established at the time of certificate issuance. To insure continued performance, ast adhere to all requirements listed in the instrument manual.
Certifie Certific	Title: Instrument Service Technician Title: Instrument Service Technician
	5600 Lindbergh Drive • Loveland, CO 80538 (800) 227-4224 / FAX (970) 461-3924
GRENK	SKASKASKASKASK

Appendix 3 Detailed Laboratory Results and Test Methods



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-58219-1 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-58219-1 Job Description: AusJam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elwared

Approved for release. Marty Edwards Senior Project Manager 8/9/2011 4:58 PM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 08/09/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc. TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514 Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com



Comments

No additional comments.

Receipt

All samples were received in good condition @ 18.6°C, 17.4°C.

GC Semi VOA

No analytical or quality issues were noted.

Metals

Method 3010A,7470A: The following samples submitted for metals analysis were received with insufficient preservation (pH >2): AJ 1 (400-58219-1), AJ 15 (400-58219-10), AJ 3 (400-58219-2), AJ 5 (400-58219-3), AJ 7 (400-58219-4), AJ 8 (400-58219-5). Lab preserved to < 2 on 7/29/11.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Organic Prep

Method 3520C: Insufficient sample volume was provided to meet method-mandated requirements for matrix spike/matrix spike duplicate (MS/MSD) analyses for batch 400-136356 Method FL_PRO.

No other analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: CL Environmental

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method	
400-58219-1	AJ 1	0.012		0.0050	······································	00400	
Arsenic		0.013		0.0050	mg/L	6010B	
Copper		0.36		0.010	mg/L	6010B	
Zino		0.025		0.0050	mg/L	6010B	
Thiographic		0.11		0.020	mg/L	SM 4500 CN M	
Thocyanate		5.4		1.1	ilig/L	3M 4300 CN M	
400-58219-2	AJ 3						
Arsenic		0.013		0.0050	mg/L	6010B	
Copper		0.52		0.010	mg/L	6010B	
Lead		0.026		0.0050	mg/L	6010B	
Zinc		0.11		0.020	mg/L	6010B	
Thiocyanate		9.3		1.1	mg/L	SM 4500 CN M	
400-58219-3	AJ 5						
Arsenic		0.011		0.0050	mg/L	6010B	
Copper		0.40		0.010	mg/L	6010B	
Lead		0.025		0.0050	mg/L	6010B	
Zinc		0.077		0.020	mg/L	6010B	
Thiocyanate		9.0		1.1	mg/L	SM 4500 CN M	
400-58219-4	AJ 7						
Arsenic		0.013		0.0050	mg/L	6010B	
Copper		0.94		0.010	mg/L	6010B	
Lead		0.029		0.0050	mg/L	6010B	
Zinc		0.10		0.020	mg/L	6010B	
Thiocyanate		9.2		1.1	mg/L	SM 4500 CN M	
400-58219-5	AJ 8						
Arsenic		0.013		0.0050	mg/L	6010B	
Copper		0.55		0.010	mg/L	6010B	
Lead		0.029		0.0050	mg/L	6010B	
Zinc		0.12		0.020	mg/L	6010B	
Mercury		0.00023		0.00020	mg/L	7470A	
Thiocyanate		9.3		1.1	mg/L	SM 4500 CN M	
400-58219-6	AJ 9						
Thiocyanate		0.17		0.10	mg/L	SM 4500 CN M	

EXECUTIVE SUMMARY - Detections

Client: CL Environmental

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method	
400-58219-7 Thiocyanate	AJ 10	0.29		0.10	mg/L	SM 4500 CN M	
-					-		
400-58219-8	AJ 13						
Thiocyanate		0.20		0.10	mg/L	SM 4500 CN M	
400-58219-9	AJ 14						
Thiocyanate		0.20		0.10	mg/L	SM 4500 CN M	
400-58219-10	AJ 15						
Arsenic		0.013		0.0050	mg/L	6010B	
Copper		0.50		0.010	mg/L	6010B	
Lead		0.027		0.0050	mg/L	6010B	
Zinc		0.12		0.020	mg/L	6010B	
Mercury		0.00025		0.00020	mg/L	7470A	
Thiocyanate		9.4		1.1	mg/L	SM 4500 CN M	
400-58219-11	AJS 1						
Arsenic		2.7		0.75	mg/Kg	6010B	
Cadmium		0.75		0.75	mg/Kg	6010B	
Lead		11		0.75	mg/Kg	6010B	
Mercury		0.10		0.022	mg/Kg	7471A	
Percent Moisture		39		0.10	%	Moisture	
400-58219-12	AJS 4						
Arsenic		3.0		0.67	mg/Kg	6010B	
Cadmium		2.6		0.67	mg/Kg	6010B	
Lead		34		0.67	mg/Kg	6010B	
Mercury		0.11		0.019	mg/Kg	7471A	
Percent Moisture		30		0.10	%	Moisture	
400-58219-13	AJS 5						
C8-C40		43		13	mg/Kg	FL-PRO	
Arsenic		2.7		0.59	mg/Kg	6010B	
Lead		5.9		0.59	mg/Kg	6010B	
Mercury		0.22		0.016	mg/Kg	7471A	
Percent Moisture		22		0.10	%	Moisture	

EXECUTIVE SUMMARY - Detections

Client: CL Environmental

Lab Sample ID	Client Sample ID			Reporting			
Analyte		Result	Qualifier	Limit	Units	Method	
400-58219-14	AJS 3						
Arsenic		2.2		0.55	mg/Kg	6010B	
Cadmium		0.66		0.55	mg/Kg	6010B	
Lead		6.2		0.55	mg/Kg	6010B	
Mercury		0.16		0.014	mg/Kg	7471A	
Percent Moisture		15		0.10	%	Moisture	

METHOD SUMMARY

Client: CL Environmental

Job Number: 400-58219-1

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Florida - Petroleum Range Organics (GC) Ultrasonic Extraction	TAL PEN	FL-DEP FL-PRO	SW846 3550B
Inductively Coupled Plasma - Atomic Emission Spectrometry Preparation, Metals	TAL PEN	SW846 6010B	SW846 3050B
Mercury Preparation, Mercury	TAL PEN	SW846 7471A	SW846 7471A
Percent Moisture	TAL PEN	EPA Moisture	
Matrix Water			
Florida - Petroleum Range Organics (GC) Liquid-Liquid Extraction (Continuous)	TAL PEN	FL-DEP FL-PRO	SW846 3520C
Metals (ICP) Preparation, Total Metals	TAL PEN	SW846 6010B	SW846 3010A
Mercury Preparation, Mercury	TAL PEN	SW846 7470A	SW846 7470A
Thiocyanate	TAL MOB	SM SM 4500 CN	Μ

Lab References:

TAL MOB = TestAmerica Mobile

TAL PEN = TestAmerica Pensacola

Method References:

EPA = US Environmental Protection Agency

FL-DEP = State Of Florida Department Of Environmental Protection, Florida Administrative Code.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: CL Environmental

Method	Analyst	Analyst ID
FL-DEP FL-PRO FL-DEP FL-PRO	Ayers, Kim Waite, Daniel	KA DW
SW846 6010B	St. Pere, Gary	GS
SW846 7470A	Cortez, Maria	MC
SW846 7471A	Cortez, Maria	MC
EPA Moisture	Hor, Koma	КН
SM SM 4500 CN M	Norvang, Vanyda A	VAN

Client: CL Environmental

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
400-58219-1	AJ 1	Water	07/25/2011 1145	07/29/2011 1027
400-58219-2	AJ 3	Water	07/25/2011 1150	07/29/2011 1027
400-58219-3	AJ 5	Water	07/25/2011 1155	07/29/2011 1027
400-58219-4	AJ 7	Water	07/25/2011 1000	07/29/2011 1027
400-58219-5	AJ 8	Water	07/25/2011 1020	07/29/2011 1027
400-58219-6	AJ 9	Water	07/25/2011 1230	07/29/2011 1027
400-58219-7	AJ 10	Water	07/25/2011 1240	07/29/2011 1027
400-58219-8	AJ 13	Water	07/25/2011 0930	07/29/2011 1027
400-58219-9	AJ 14	Water	07/25/2011 0930	07/29/2011 1027
400-58219-10	AJ 15	Water	07/25/2011 1140	07/29/2011 1027
400-58219-11	AJS 1	Solid	07/25/2011 0930	07/29/2011 1027
400-58219-12	AJS 4	Solid	07/25/2011 1000	07/29/2011 1027
400-58219-13	AJS 5	Solid	07/25/2011 1030	07/29/2011 1027
400-58219-14	AJS 3	Solid	07/25/2011 1100	07/29/2011 1027

SAMPLE RESULTS

Client: CL Environmental

Client Sample ID:	AJ 1					
Lab Sample ID:	400-58219-1				Date	Sampled: 07/25/2011 1145
Client Matrix:	Water				Date	Received: 07/29/2011 1027
		FL-PRO Florida - Petro	oleum Range O	rganics	(GC)	
Analysis Method:	FL-PRO	Analysis Batch:	400-136495		Instrument ID:	WALLE
Prep Method:	3520C	Prep Batch:	400-136356		Lab File ID:	400-58219-c-1-a_062
Dilution:	1.0				Initial Weight/Volume:	1080 mL
Analysis Date:	08/02/2011 2058				Final Weight/Volume:	1.5 mL
Prep Date:	08/01/2011 0932				Injection Volume:	1 uL
Analyte		Result (m	ıg/L)	Qualifie	r	RL
C8-C40		ND				0.10
Surrogate		%Rec		Qualifie	Accepta	nce Limits
n-C39		57			20 - 176	
o-Terphenyl		69			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 3					
Lab Sample ID: Client Matrix:	400-58219-2 Water				Date Date	Sampled: 07/25/2011 1150 Received: 07/29/2011 1027
		FL-PRO Florida - Petro	oleum Range O	rganics	(GC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 08/02/2011 2107 08/01/2011 0932	Analysis Batch: Prep Batch:	400-136495 400-136356		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58219-c-2-a_063 1080 mL 2.6 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifie	r	RL
C8-C40		ND				0.18
Surrogate		%Rec		Qualifie	Acceptar	nce Limits
n-C39 o-Terphenyl		55 64			20 - 176 49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 5					
Lab Sample ID:	400-58219-3				Date	e Sampled: 07/25/2011 1155
Client Matrix:	Water				Date	e Received: 07/29/2011 1027
		FL-PRO Florida - Petro	leum Range O	rganics	(GC)	
Analysis Method:	FL-PRO	Analysis Batch:	400-136495		Instrument ID:	WALLE
Prep Method:	3520C	Prep Batch:	400-136356		Lab File ID:	400-58219-c-3-a_064
Dilution:	1.0				Initial Weight/Volume:	1080 mL
Analysis Date:	08/02/2011 2117				Final Weight/Volume:	1.8 mL
Prep Date:	08/01/2011 0932				Injection Volume:	1 uL
Analyte		Result (m	ıg/L)	Qualifie	r	RL
C8-C40		ND				0.13
Surrogate		%Rec		Qualifie	Accepta	nce Limits
n-C39		57			20 - 176	i
o-Terphenyl		66			49 - 143	5

Client: CL Environmental

Client Sample ID:	AJ 7					
Lab Sample ID: Client Matrix:	400-58219-4 Water				Date Date	Sampled: 07/25/2011 1000 Received: 07/29/2011 1027
		FL-PRO Florida - Petro	eleum Range O	rganics (GC))	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 08/02/2011 2127 08/01/2011 0932	Analysis Batch: Prep Batch:	400-136495 400-136356	Inst Lab Initia Fina Inje	rument ID: File ID: al Weight/Volume: al Weight/Volume: ction Volume:	WALLE 400-58219-c-4-a_065 1080 mL 1.5 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.10
Surrogate		%Rec		Qualifier	Acceptar	nce Limits
n-C39		61			20 - 176	
o-Terphenyl		71			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 8					
Lab Sample ID: Client Matrix:	400-58219-5 Water				Date Date	Sampled: 07/25/2011 1020 Received: 07/29/2011 1027
		FL-PRO Florida - Petro	eleum Range O	rganics (GC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 08/02/2011 2136 08/01/2011 0932	Analysis Batch: Prep Batch:	400-136495 400-136356		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58219-c-5-a_066 1080 mL 1.4 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.097
Surrogate		%Rec		Qualifier	Accepta	nce Limits
n-C39		60			20 - 176	
o-Terphenyl		71			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 9					
Lab Sample ID: Client Matrix:	400-58219-6 Water				Date Date	Sampled: 07/25/2011 1230 Received: 07/29/2011 1027
		FL-PRO Florida - Petro	eleum Range O	rganics (GC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 08/02/2011 2146 08/01/2011 0932	Analysis Batch: Prep Batch:	400-136495 400-136356		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58219-c-6-a_067 1070 mL 1.6 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.11
Surrogate		%Rec		Qualifier	Acceptar	nce Limits
n-C39		65			20 - 176	
o-Terphenyl		76			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 10					
Lab Sample ID: Client Matrix:	400-58219-7 Water				Date Date	Sampled: 07/25/2011 1240 Received: 07/29/2011 1027
		FL-PRO Florida - Petro	eleum Range O	rganics (GC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 08/02/2011 2156 08/01/2011 0932	Analysis Batch: Prep Batch:	400-136495 400-136356		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58219-c-7-a_068 1080 mL 1.5 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.10
Surrogate		%Rec		Qualifier	Acceptar	nce Limits
n-C39		52			20 - 176	
o-Terphenyl		65			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 13					
Lab Sample ID: Client Matrix:	400-58219-8 Water				Date Date	Sampled: 07/25/2011 0930 Received: 07/29/2011 1027
		FL-PRO Florida - Petro	eleum Range O	rganics (GC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 08/02/2011 2216 08/01/2011 0932	Analysis Batch: Prep Batch:	400-136495 400-136356		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58219-c-8-a_070 1080 mL 1.5 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.10
Surrogate		%Rec		Qualifier	Acceptar	nce Limits
n-C39		71			20 - 176	
o-Terphenyl		75			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 14					
Lab Sample ID:	400-58219-9				Date	e Sampled: 07/25/2011 0930
Client Matrix:	Water				Date	e Received: 07/29/2011 1027
		FL-PRO Florida - Petro	leum Range O	rganics ((GC)	
Analysis Method:	FL-PRO	Analysis Batch:	400-136495		Instrument ID:	WALLE
Prep Method:	3520C	Prep Batch:	400-136356		Lab File ID:	400-58219-c-9-a_071
Dilution:	1.0				Initial Weight/Volume:	1080 mL
Analysis Date:	08/02/2011 2226				Final Weight/Volume:	1.7 mL
Prep Date:	08/01/2011 0932				Injection Volume:	1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.12
Surrogate		%Rec		Qualifier	Accepta	ince Limits
n-C39		67			20 - 176	6
o-Terphenyl		76			49 - 143	3

Client: CL Environmental

Client Sample ID:	AJ 15					
Lab Sample ID: Client Matrix:	400-58219-10 Water				Date Date	Sampled: 07/25/2011 1140 Received: 07/29/2011 1027
		FL-PRO Florida - Petro	eleum Range O	rganics	(GC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 08/02/2011 2236 08/01/2011 0932	Analysis Batch: Prep Batch:	400-136495 400-136356		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58219-c-10-a_07 1080 mL 1.6 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifie	r	RL
C8-C40		ND				0.11
Surrogate		%Rec		Qualifie	r Acceptar	nce Limits
n-C39		54			20 - 176	
o-Terphenyl		69			49 - 143	

Client: CL Environmental

Client Sample ID:	AJS 1					
Lab Sample ID:	400-58219-11				Date S	Sampled: 07/25/2011 0930
Client Matrix:	Solid	% Moisture	9: 39.4		Date I	Received: 07/29/2011 1027
	FI	L-PRO Florida - Petro	oleum Range O	rganics (GC)		
Analysis Method:	FL-PRO	Analysis Batch:	400-136407	Instrument I	D:	WALLE
Prep Method:	3550B	Prep Batch:	400-136376	Lab File ID:		400-58219-a-11-c_01
Dilution:	1.0			Initial Weight	/Volume:	30.09 g
Analysis Date:	08/02/2011 1320			Final Weight	/Volume:	1.4 mL
Prep Date:	08/01/2011 1044			Injection Volu	ume:	1 uL
Analyte	DryWt Corrected:	Y Result (m	ıg/Kg)	Qualifier		RL
C8-C40		ND				12
Surrogate		%Rec		Qualifier	Acceptan	ce Limits
n-C39		56			37 - 138	
o-Terphenyl		74			50 - 121	

Client: CL Environmental

Client Sample ID:	AJS 4					
Lab Sample ID:	400-58219-12				Date	Sampled: 07/25/2011 1000
Client Matrix:	Solid	% Moisture	29.6		Date	Received: 07/29/2011 1027
	FL	-PRO Florida - Petro	oleum Range C	Organics (GC)		
Analysis Method:	FL-PRO	Analysis Batch:	400-136407	Instrument I	D:	WALLE
Prep Method:	3550B	Prep Batch:	400-136376	Lab File ID:		400-58219-a-12-c_01
Dilution:	1.0			Initial Weigh	t/Volume:	30.33 g
Analysis Date:	08/02/2011 1330			Final Weight	t/Volume:	1.6 mL
Prep Date:	08/01/2011 1044			Injection Vol	ume:	1 uL
Analyte	DryWt Corrected: Y	′ Result (m	ng/Kg)	Qualifier		RL
C8-C40		ND				11
Surrogate		%Rec		Qualifier	Acceptan	ce Limits
n-C39		57			37 - 138	
o-Terphenyl		62			50 - 121	

Client: CL Environmental

Client Sample ID:	AJS 5					
Lab Sample ID:	400-58219-13				Date	Sampled: 07/25/2011 1030
Client Matrix:	Solid	% Moisture	: 22.4		Date	Received: 07/29/2011 1027
		FL-PRO Florida - Petro	leum Range O	rganics (GC)		
Analysis Method:	FL-PRO	Analysis Batch:	400-136407	Instrument	t ID:	WALLE
Prep Method:	3550B	Prep Batch:	400-136376	Lab File ID) <u>:</u>	400-58219-a-13-c_01
Dilution:	1.0			Initial Weig	ght/Volume:	30.35 g
Analysis Date:	08/02/2011 1340			Final Weig	ht/Volume:	2.0 mL
Prep Date:	08/01/2011 1044			Injection V	olume:	1 uL
Analyte	DryWt Corrected	: Y Result (m	Result (mg/Kg)			RL
C8-C40		43				13
Surrogate		%Rec		Qualifier	Acceptar	nce Limits
n-C39		52			37 - 138	
o-Terphenyl		64			50 - 121	

Client: CL Environmental

Client Sample ID:	AJS 3					
Lab Sample ID:	400-58219-14				Date	Sampled: 07/25/2011 1100
Client Matrix:	Solid	% Moisture	e: 14.6		Date	e Received: 07/29/2011 1027
	FL	-PRO Florida - Petro	oleum Range C	rganics (GC)		
Analysis Method:	FL-PRO	Analysis Batch:	400-136407	Instru	ument ID:	WALLE
Prep Method:	3550B	Prep Batch:	400-136376	Lab F	File ID:	400-58219-a-14-c_02
Dilution:	1.0			Initial	Weight/Volume:	30.19 g
Analysis Date:	08/02/2011 1349			Final	Weight/Volume:	1.8 mL
Prep Date:	08/01/2011 1044			Inject	tion Volume:	1 uL
Analyte	DryWt Corrected: \	Result (n	ng/Kg)	Qualifier		RL
C8-C40		ND				10
Surrogate		%Rec		Qualifier	Accepta	nce Limits
n-C39		51			37 - 138	
o-Terphenyl		65			50 - 121	

Client: CL Environmental

Client Sample ID:	AJ 1					
Lab Sample ID: Client Matrix:	400-58219-1 Water				Date Sampled: 07/25/2011 1 Date Received: 07/29/2011 1	1145 1027
		6010B	Metals (ICP)			
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/V	'olume: 50 mL	
Analysis Date:	08/02/2011 1319			Final Weight/V	olume: 50 mL	
Prep Date:	08/01/2011 0946					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Arsenic		0.013			0.0050	
Cadmium		ND			0.0050	
Copper		0.38			0.010	
Lead		0.025			0.0050	
Zinc		0.11			0.020	
		7470/	A Mercury			
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PRN	
Dilution:	1.0			Initial Weight/V	'olume: 40 mL	
Analysis Date:	08/02/2011 1407			Final Weight/V	olume: 40 mL	
Prep Date:	08/02/2011 0830			C C		
Analyte		Result (m	ng/L)	Qualifier	RL	
Mercury		ND			0.00020	

Client: CL Environmental

Client Sample ID:	AJ 3					
Lab Sample ID: Client Matrix:	400-58219-2 Water				Date Sampled: 07/25/2011 1 Date Received: 07/29/2011 1	1150 1027
		6010B	Metals (ICP)			
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/V	'olume: 50 mL	
Analysis Date:	08/02/2011 1323			Final Weight/V	olume: 50 mL	
Prep Date:	08/01/2011 0946					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Arsenic		0.013			0.0050	
Cadmium		ND			0.0050	
Copper		0.52			0.010	
Lead		0.026			0.0050	
Zinc		0.11			0.020	
		7470/	A Mercury			
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PRN	
Dilution:	1.0			Initial Weight/V	'olume: 40 mL	
Analysis Date:	08/02/2011 1408			Final Weight/V	olume: 40 mL	
Prep Date:	08/02/2011 0830			C C		
Analyte		Result (m	ng/L)	Qualifier	RL	
Mercury		ND			0.00020	

Client: CL Environmental

Client Sample ID:	AJ 5						
Lab Sample ID: Client Matrix:	400-58219-3 Water				Date Sa Date Re	mpled: 07/25/2011 115 eceived: 07/29/2011 102	5 ?7
		6010B	Metals (ICP)				-
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument I):	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:		N/A	
Dilution:	1.0			Initial Weight	/Volume:	50 mL	
Analysis Date:	08/02/2011 1326			Final Weight	/Volume:	50 mL	
Prep Date:	08/01/2011 0946						
Analyte		Result (m	ıg/L)	Qualifier		RL	
Arsenic		0.011				0.0050	_
Cadmium		ND				0.0050	
Copper		0.40				0.010	
Lead		0.025				0.0050	
Zinc		0.077				0.020	
		7470/	A Mercury				-
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument II):	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:		HW136420.PRN	
Dilution:	1.0			Initial Weight	/Volume:	40 mL	
Analysis Date:	08/02/2011 1409			Final Weight	/Volume:	40 mL	
Prep Date:	08/02/2011 0830			C C			
Analyte		Result (m	ng/L)	Qualifier		RL	
Mercury		ND				0.00020	

Client: CL Environmental

Client Sample ID:	AJ 7						
Lab Sample ID: Client Matrix:	400-58219-4 Water		Date Sampled: 0 Date Received: 0	e Sampled: 07/25/2011 1000 e Received: 07/29/2011 1027			
		6010B I	Metals (ICP)				
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	: 6500 ICP	Duo	
Prep Method:	3010A	Prep Batch:	Batch: 400-136361 Lab File ID:		N/A	N/A	
Dilution:	1.0			Initial Weight/	Volume: 50 mL		
Analysis Date:	08/02/2011 1339			Final Weight/\	/olume: 50 mL		
Prep Date:	08/01/2011 0946						
Analyte		Result (mg/L) Qualifier		RL			
Arsenic		0.013			0.00	50	
Cadmium		ND			0.00	50	
Copper		0.94			0.01	0	
Lead		0.029			0.00	50	
Zinc		0.10			0.020	0	
		7470	A Mercury				
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	: HYDRA A	A	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW13642	20.PRN	
Dilution:	1.0			Initial Weight/	Volume: 40 mL		
Analysis Date:	08/02/2011 1411			Final Weight/	Volume: 40 mL		
Prep Date:	08/02/2011 0830			0			
Analyte		Result (m	ig/L)	Qualifier	RL		
Mercury		ND			0.00	020	

Client: CL Environmental

Client Sample ID:	AJ 8						
Lab Sample ID: Client Matrix:	400-58219-5 Water		Date Sampled: 07/25/2011 Date Received: 07/29/2011	ite Sampled: 07/25/2011 1020 ate Received: 07/29/2011 1027			
		6010B	Metals (ICP)				
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo		
Prep Method:	3010A	Prep Batch:	Prep Batch: 400-136361 Lab File ID:		N/A	N/A	
Dilution:	1.0			Initial Weight/V	olume: 50 mL		
Analysis Date:	08/02/2011 1342			Final Weight/V	olume: 50 mL		
Prep Date:	08/01/2011 0946						
Analyte		Result (mg/L) Qualifier		RL			
Arsenic		0.013			0.0050		
Cadmium		ND			0.0050		
Copper		0.55			0.010		
Lead		0.029			0.0050		
Zinc		0.12			0.020		
		7470	A Mercury				
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA		
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PRN		
Dilution:	1.0			Initial Weight/V	olume: 40 mL		
Analysis Date:	08/02/2011 1412			Final Weight/V	olume: 40 mL		
Prep Date:	08/02/2011 0830			-			
Analyte		Result (m	ng/L)	Qualifier	RL		
Mercury		0.00023			0.00020		
Client: CL Environmental

Client Sample ID:	AJ 9				
Lab Sample ID: Client Matrix:	400-58219-6 Water			C	ate Sampled: 07/25/2011 1230 Pate Received: 07/29/2011 1027
		6010B	Metals (ICP)		
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volum	e: 50 mL
Analysis Date:	08/02/2011 1346			Final Weight/Volume	୬: 50 mL
Prep Date:	08/01/2011 0946				
Analyte		Result (m	ıg/L)	Qualifier	RL
Arsenic		ND			0.0050
Cadmium		ND			0.0050
Copper		ND			0.010
Lead		ND			0.0050
Zinc		ND			0.020
		7470	A Mercury		
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PRN
Dilution:	1.0			Initial Weight/Volum	e: 40 mL
Analysis Date:	08/02/2011 1414			Final Weight/Volume	e: 40 mL
Prep Date:	08/02/2011 0830			-	
Analyte		Result (m	ng/L)	Qualifier	RL
Mercury		ND			0.00020

Client: CL Environmental

Client Sample ID:	AJ 10					
Lab Sample ID: Client Matrix:	400-58219-7 Water				Date Sampled: 07/25/2011 Date Received: 07/29/2011	1240 1027
		6010B	Metals (ICP)			
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volur	ne: 50 mL	
Analysis Date:	08/02/2011 1349			Final Weight/Volum	ne: 50 mL	
Prep Date:	08/01/2011 0946					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Arsenic		ND			0.0050	
Cadmium		ND			0.0050	
Copper		ND			0.010	
Lead		ND			0.0050	
Zinc		ND			0.020	
		7470	A Mercury			
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PRN	
Dilution:	1.0			Initial Weight/Volur	ne: 40 mL	
Analysis Date:	08/02/2011 1415			Final Weight/Volun	ne: 40 mL	
Prep Date:	08/02/2011 0830			-		
Analyte		Result (m	ng/L)	Qualifier	RL	
Mercury		ND			0.00020	

Client: CL Environmental

Client Sample ID:	AJ 13					
Lab Sample ID: Client Matrix:	400-58219-8 Water				Date Sampled: 07/25/201 Date Received: 07/29/201	1 0930 1 1027
		6010B	Metals (ICP)			
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Vol	ume: 50 mL	
Analysis Date:	08/02/2011 1404			Final Weight/Volu	ume: 50 mL	
Prep Date:	08/01/2011 0946					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Arsenic		ND			0.0050	
Cadmium		ND			0.0050	
Copper		ND			0.010	
Lead		ND			0.0050	
Zinc		ND			0.020	
		7470	A Mercury			
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PRN	
Dilution:	1.0			Initial Weight/Vol	ume: 40 mL	
Analysis Date:	08/02/2011 1416			Final Weight/Volu	ume: 40 mL	
Prep Date:	08/02/2011 0830			Ŭ		
Analyte		Result (m	ng/L)	Qualifier	RL	
Mercury		ND			0.00020	

Client: CL Environmental

Client Sample ID:	AJ 14					
Lab Sample ID: Client Matrix:	400-58219-9 Water				Date Sampled: 07/25/2011 0 Date Received: 07/29/2011 1)930 027
		6010B	Metals (ICP)			
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volu	ime: 50 mL	
Analysis Date:	08/02/2011 1407			Final Weight/Volu	me: 50 mL	
Prep Date:	08/01/2011 0946					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Arsenic		ND			0.0050	
Cadmium		ND			0.0050	
Copper		ND			0.010	
Lead		ND			0.0050	
Zinc		ND			0.020	
		7470	A Mercury			
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PRN	
Dilution:	1.0			Initial Weight/Volu	ıme: 40 mL	
Analysis Date:	08/02/2011 1425			Final Weight/Volu	me: 40 mL	
Prep Date:	08/02/2011 0830			-		
Analyte		Result (m	ıg/L)	Qualifier	RL	
Mercury		ND			0.00020	

Client: CL Environmental

Client Sample ID:	AJ 15					
Lab Sample ID: Client Matrix:	400-58219-10 Water				Date Sampled: 07/25/2 Date Received: 07/29/2	2011 1140 2011 1027
		6010B	Metals (ICP)			
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136361	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/\	/olume: 50 mL	
Analysis Date:	08/02/2011 1411			Final Weight/V	/olume: 50 mL	
Prep Date:	08/01/2011 0946					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Arsenic		0.013			0.0050	
Cadmium		ND			0.0050	
Copper		0.50			0.010	
Lead		0.027			0.0050	
Zinc		0.12			0.020	
		7470	A Mercury			
Analysis Method:	7470A	Analysis Batch:	400-136476	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136420	Lab File ID:	HW136420.PR	N
Dilution:	1.0			Initial Weight/\	/olume: 40 mL	
Analysis Date:	08/02/2011 1427			Final Weight/V	/olume: 40 mL	
Prep Date:	08/02/2011 0830			Ū		
Analyte		Result (m	ng/L)	Qualifier	RL	
Mercury		0.00025			0.00020	

Client Sample ID:	AJS 1				
Lab Sample ID:	400-58219-11	0/ N · · ·	<u> </u>		Date Sampled: 07/25/2011 0930
Client Matrix:	ient Matrix: Solid %				Date Received: 07/29/2011 1027
	6010B Induct	tively Coupled Plas	ma - Atomic E	mission Spectrometry	
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo
Prep Method:	3050B	Prep Batch:	400-136301	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Vol	ume: .548 g
Analysis Date:	08/02/2011 1643			Final Weight/Vol	ume: 50 mL
Prep Date:	07/29/2011 1637				
Analyte	DryWt Corrected: Y	Result (m	ıg/Kg)	Qualifier	RL
Arsenic		2.7			0.75
Cadmium		0.75			0.75
Lead		11			0.75
		7471/	A Mercury		
Analysis Method:	7471A	Analysis Batch:	400-136702	Instrument ID:	HYDRA AA
Prep Method:	7471A	Prep Batch:	400-136573	Lab File ID:	HS136573A.PRN
Dilution:	1.0			Initial Weight/Vol	ume: .6069 g
Analysis Date:	08/05/2011 1157			Final Weight/Vol	ume: 40 mL
Prep Date:	08/05/2011 0800			-	
Analyte	DryWt Corrected: Y	Result (m	ıg/Kg)	Qualifier	RL
Mercury		0.10			0.022

Client Sample ID:	AJS 4						
Lab Sample ID:	400-58219-12				l	Date Sam	pled: 07/25/2011 1000
Client Matrix:	Solid	Solid % Moisture: 29.6				Date Rece	eived: 07/29/2011 1027
	6010B Induct	ively Coupled Plas	ma - Atomic E	mission	Spectrometry		
Analysis Method:	6010B	Analysis Batch:	400-136486		Instrument ID:	65	00 ICP Duo
Prep Method:	3050B	Prep Batch:	400-136301		Lab File ID:	N/	A
Dilution:	1.0				Initial Weight/Volun	ne: .5	29 g
Analysis Date:	08/02/2011 1646				Final Weight/Volum	ne: 50	mL
Prep Date:	07/29/2011 1637						
Analyte	DryWt Corrected: Y	Result (m	ıg/Kg)	Qualifie	r		RL
Arsenic		3.0					0.67
Cadmium		2.6					0.67
Lead		34					0.67
		7471/	A Mercury				
Analysis Method:	7471A	Analysis Batch:	400-136702		Instrument ID:	н	/DRA AA
Prep Method:	7471A	Prep Batch:	400-136573		Lab File ID:	HS	S136573A.PRN
Dilution:	1.0				Initial Weight/Volun	ne: .6	108 g
Analysis Date:	08/05/2011 1158				Final Weight/Volum	ne: 40	mL
Prep Date:	08/05/2011 0800						
Analyte	DryWt Corrected: Y	Result (m	ıg/Kg)	Qualifie	r		RL
Mercury		0.11					0.019

Client: CL Environmen	tal
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Client Sample ID:	AJS 5				
Lab Sample ID:	400-58219-13				Date Sampled: 07/25/2011 103
Client Matrix:	Solid	% Moisture	e: 22.4		Date Received: 07/29/2011 102
	6010B Induct	tively Coupled Plas	sma - Atomic E	mission Spectrometry	
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo
Prep Method:	3050B	Prep Batch:	400-136301	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Vo	olume: .548 g
Analysis Date:	08/02/2011 1649			Final Weight/Vo	olume: 50 mL
Prep Date:	07/29/2011 1637				
Analyte	DryWt Corrected: Y	Result (n	ng/Kg)	Qualifier	RL
Arsenic		2.7			0.59
Cadmium		ND			0.59
Lead		5.9			0.59
		7471	A Mercury		
Analysis Method:	7471A	Analysis Batch:	400-136702	Instrument ID:	HYDRA AA
Prep Method:	7471A	Prep Batch:	400-136573	Lab File ID:	HS136573A.PRN
Dilution:	1.0			Initial Weight/Vo	olume: .6233 g
Analysis Date:	08/05/2011 1159			Final Weight/Vo	olume: 40 mL
Prep Date:	08/05/2011 0800			-	
Analyte	DryWt Corrected: Y	Result (n	ng/Kg)	Qualifier	RL
Mercury		0.22			0.016

Client:	CL Environmental	
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Client Sample ID:	AJS 3				
Lab Sample ID:	400-58219-14	0/ Moioture	14.6		Date Sampled: 07/25/2011 1100
Client Matrix.	50110		e. 14.0		Date Received. 07/29/2011 1027
	6010B Induc	tively Coupled Plas	sma - Atomic E	mission Spectrometry	
Analysis Method:	6010B	Analysis Batch:	400-136486	Instrument ID:	6500 ICP Duo
Prep Method:	3050B	Prep Batch:	400-136301	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Vol	ume: .529 g
Analysis Date:	08/02/2011 1652			Final Weight/Volu	ume: 50 mL
Prep Date:	07/29/2011 1637				
Analyte	DryWt Corrected: Y	Result (m	ng/Kg)	Qualifier	RL
Arsenic		2.2			0.55
Cadmium		0.66			0.55
Lead		6.2			0.55
		7471.	A Mercury		
Analysis Method:	7471A	Analysis Batch:	400-136702	Instrument ID:	HYDRA AA
Prep Method:	7471A	Prep Batch:	400-136573	Lab File ID:	HS136573A.PRN
Dilution:	1.0			Initial Weight/Vol	ume: .6467 g
Analysis Date:	08/05/2011 1201			Final Weight/Volu	ume: 40 mL
Prep Date:	08/05/2011 0800				
Analyte	DryWt Corrected: Y	Result (m	ng/Kg)	Qualifier	RL
Mercury		0.16			0.014

Client: CL Environmental

	General Chemistry									
Client Sample ID:	AJ 1									
Lab Sample ID:	400-58219-1				Date Sample	d: 07/25/2011 1145				
Client Matrix:	Water				Date Receive	ed: 07/29/2011 1027				
Analyte		Result	Qual Units	RL	Dil	Method				
Thiocyanate		9.4	mg/L	1.1	11	SM 4500 CN M				
	Analysis Batch: 700-	104116	Analysis Date: 08/04/2011 1	407						

Client: CL Environmental

General Chemistry									
Client Sample ID:	AJ 3								
Lab Sample ID:	400-58219-2				Date	Sample	d: 07/25/2011 1150		
Client Matrix:	Water				Date	Receive	ed: 07/29/2011 1027		
Analyte		Result	Qual	Units	RL	Dil	Method		
Thiocyanate		9.3		mg/L	1.1	11	SM 4500 CN M		
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1412					

Client: CL Environmental

	General Chemistry									
Client Sample ID:	AJ 5									
Lab Sample ID:	400-58219-3				Date	Sample	d: 07/25/2011 1155			
Client Matrix:	Water				Date	Receive	ed: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method			
Thiocyanate		9.0		mg/L	1.1	11	SM 4500 CN M			
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1412						

Client: CL Environmental

General Chemistry										
Client Sample ID:	AJ 7									
Lab Sample ID:	400-58219-4				Da	te Sample	d: 07/25/2011 1000			
Client Matrix:	Water				Da	te Receive	ed: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method			
Thiocyanate		9.2		mg/L	1.1	11	SM 4500 CN			
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1412			IVI			

Client: CL Environmental

General Chemistry									
Client Sample ID:	AJ 8								
Lab Sample ID:	400-58219-5				Date	Sample	d: 07/25/2011 1020		
Client Matrix:	Water				Date	Receive	ed: 07/29/2011 1027		
Analyte		Result	Qual	Units	RL	Dil	Method		
Thiocyanate		9.3		mg/L	1.1	11	SM 4500 CN M		
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1412					

Client: CL Environmental

	General Chemistry									
Client Sample ID:	AJ 9									
Lab Sample ID:	400-58219-6				Date	Sample	d: 07/25/2011 1230			
Client Matrix:	Water				Date	Receive	ed: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method			
Thiocyanate		0.17		mg/L	0.10	1.0	SM 4500 CN M			
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1405						

Client: CL Environmental

	General Chemistry									
Client Sample ID:	AJ 10									
Lab Sample ID:	400-58219-7				Dat	e Sampleo	d: 07/25/2011 1240			
Client Matrix:	Water				Dat	e Receive	d: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method			
Thiocyanate		0.29		mg/L	0.10	1.0	SM 4500 CN M			
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1405						

Client: CL Environmental

	General Chemistry									
Client Sample ID:	AJ 13									
Lab Sample ID:	400-58219-8				Date S	ample	d: 07/25/2011 0930			
Client Matrix:	Water				Date F	eceive	ed: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method			
Thiocyanate		0.20		mg/L	0.10	1.0	SM 4500 CN M			
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1405						

Client: CL Environmental

General Chemistry									
Client Sample ID:	AJ 14								
Lab Sample ID:	400-58219-9				Date	Sample	d: 07/25/2011 0930		
Client Matrix:	Water				Date	Receive	ed: 07/29/2011 1027		
Analyte		Result	Qual	Units	RL	Dil	Method		
Thiocyanate		0.20		mg/L	0.10	1.0	SM 4500 CN M		
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1405					

Client: CL Environmental

General Chemistry										
Client Sample ID:	AJ 15									
Lab Sample ID:	400-58219-10				Da	te Sample	d: 07/25/2011 1140			
Client Matrix:	Water				Da	te Receive	ed: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method			
Thiocyanate		9.4		mg/L	1.1	11	SM 4500 CN			
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1412			IVI			

Client: CL Environmental

	General Chemistry									
Client Sample ID:	AJS 1									
Lab Sample ID:	400-58219-11					Date Sample	ed: 07/25/2011 0930			
Client Matrix:	Solid					Date Receiv	red: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method			
Percent Moisture		39		%	0.10	1.0	Moisture			
	Analysis Batch: 400-1	36307	Analysis Date:	07/29/2011 1628			DryWt Corrected: N			

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJS 4						
Lab Sample ID:	400-58219-12					Date Sample	ed: 07/25/2011 1000
Client Matrix:	Solid					Date Receiv	ed: 07/29/2011 1027
Analyte		Result	Qual	Units	RL	Dil	Method
Percent Moisture		30		%	0.10	1.0	Moisture
	Analysis Batch: 400-1	36307	Analysis Date:	07/29/2011 1628			DryWt Corrected: N

Client: CL Environmental

			Ger	neral Chemistry			
Client Sample ID:	AJS 5						
Lab Sample ID:	400-58219-13					Date Sample	ed: 07/25/2011 1030
Client Matrix:	Solid					Date Receiv	red: 07/29/2011 1027
Analyte		Result	Qual	Units	RL	Dil	Method
Percent Moisture		22		%	0.10	1.0	Moisture
	Analysis Batch: 400-1	36307	Analysis Date	: 07/29/2011 1628			DryWt Corrected: N

Client: CL Environmental

			Gen	eral Chemistry			
Client Sample ID:	AJS 3						
Lab Sample ID:	400-58219-14					Date Sample	ed: 07/25/2011 1100
Client Matrix:	Solid					Date Receive	ed: 07/29/2011 1027
Analyte		Result	Qual	Units	RL	Dil	Method
Percent Moisture		15		%	0.10	1.0	Moisture
	Analysis Batch: 400-13	6307	Analysis Date:	07/29/2011 1628			DryWt Corrected: N

QUALITY CONTROL RESULTS

Job Number: 400-58219-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 400-136356					
LCS 400-136356/16-A	Lab Control Sample	Т	Water	3520C	
MB 400-136356/17-A	Method Blank	Т	Water	3520C	
400-58219-1	AJ 1	Т	Water	3520C	
400-58219-2	AJ 3	Т	Water	3520C	
400-58219-3	AJ 5	Т	Water	3520C	
400-58219-4	AJ 7	Т	Water	3520C	
400-58219-5	AJ 8	Т	Water	3520C	
400-58219-6	AJ 9	Т	Water	3520C	
400-58219-7	AJ 10	Т	Water	3520C	
400-58219-8	AJ 13	Т	Water	3520C	
400-58219-9	AJ 14	Т	Water	3520C	
400-58219-10	AJ 15	Т	Water	3520C	
Prep Batch: 400-136376					
LCS 400-136376/12-A	Lab Control Sample	Т	Solid	3550B	
MB 400-136376/13-A	Method Blank	Т	Solid	3550B	
400-58219-11	AJS 1	Т	Solid	3550B	
400-58219-12	AJS 4	Т	Solid	3550B	
400-58219-13	AJS 5	Т	Solid	3550B	
400-58219-14	AJS 3	Т	Solid	3550B	
400-58219-14MS	Matrix Spike	Т	Solid	3550B	
400-58219-14MSD	Matrix Spike Duplicate	Т	Solid	3550B	
Analysis Batch:400-13640	07				
LCS 400-136376/12-A	Lab Control Sample	Т	Solid	FL-PRO	400-136376
MB 400-136376/13-A	Method Blank	Т	Solid	FL-PRO	400-136376
400-58219-11	AJS 1	Т	Solid	FL-PRO	400-136376
400-58219-12	AJS 4	Т	Solid	FL-PRO	400-136376
400-58219-13	AJS 5	Т	Solid	FL-PRO	400-136376
400-58219-14	AJS 3	Т	Solid	FL-PRO	400-136376
400-58219-14MS	Matrix Spike	Т	Solid	FL-PRO	400-136376
400-58219-14MSD	Matrix Spike Duplicate	Т	Solid	FL-PRO	400-136376

Quality Control Results

Job Number: 400-58219-1

Client: CL Environmental

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:400-1364	95				
LCS 400-136356/16-A	Lab Control Sample	Т	Water	FL-PRO	400-136356
MB 400-136356/17-A	Method Blank	Т	Water	FL-PRO	400-136356
400-58219-1	AJ 1	Т	Water	FL-PRO	400-136356
400-58219-2	AJ 3	Т	Water	FL-PRO	400-136356
400-58219-3	AJ 5	Т	Water	FL-PRO	400-136356
400-58219-4	AJ 7	Т	Water	FL-PRO	400-136356
400-58219-5	AJ 8	Т	Water	FL-PRO	400-136356
400-58219-6	AJ 9	Т	Water	FL-PRO	400-136356
400-58219-7	AJ 10	Т	Water	FL-PRO	400-136356
400-58219-8	AJ 13	Т	Water	FL-PRO	400-136356
400-58219-9	AJ 14	Т	Water	FL-PRO	400-136356
400-58219-10	AJ 15	Т	Water	FL-PRO	400-136356

Report Basis

T = Total

Job Number: 400-58219-1

QC Association Summary

		Report				
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch	
Metals						
Prep Batch: 400-136301						
LCS 400-136301/20-A	Lab Control Sample	Т	Solid	3050B		
MB 400-136301/19-A	Method Blank	Т	Solid	3050B		
400-58219-11	AJS 1	Т	Solid	3050B		
400-58219-12	AJS 4	т	Solid	3050B		
400-58219-13	AJS 5	Т	Solid	3050B		
400-58219-14	AJS 3	т	Solid	3050B		
400-58222-A-1-B MS	Matrix Spike	т	Solid	3050B		
400-58222-A-1-C MSD	Matrix Spike Duplicate	Т	Solid	3050B		
Prep Batch: 400-136361						
LCS 400-136361/25-A	Lab Control Sample	Т	Water	3010A		
MB 400-136361/24-A	Method Blank	Т	Water	3010A		
400-58214-E-1-B MS	Matrix Spike	Т	Water	3010A		
400-58214-E-1-C MSD	Matrix Spike Duplicate	Т	Water	3010A		
400-58219-1	AJ 1	Т	Water	3010A		
400-58219-2	AJ 3	Т	Water	3010A		
400-58219-3	AJ 5	Т	Water	3010A		
400-58219-4	AJ 7	Т	Water	3010A		
400-58219-5	AJ 8	Т	Water	3010A		
400-58219-6	AJ 9	Т	Water	3010A		
400-58219-7	AJ 10	Т	Water	3010A		
400-58219-8	AJ 13	Т	Water	3010A		
400-58219-9	AJ 14	Т	Water	3010A		
400-58219-10	AJ 15	Т	Water	3010A		
Prep Batch: 400-136420						
LCS 400-136420/15-A	Lab Control Sample	Т	Water	7470A		
MB 400-136420/14-A	Method Blank	Т	Water	7470A		
400-58219-1	AJ 1	Т	Water	7470A		
400-58219-2	AJ 3	Т	Water	7470A		
400-58219-3	AJ 5	Т	Water	7470A		
400-58219-4	AJ 7	Т	Water	7470A		
400-58219-5	AJ 8	Т	Water	7470A		
400-58219-6	AJ 9	Т	Water	7470A		
400-58219-7	AJ 10	Т	Water	7470A		
400-58219-8	AJ 13	т	Water	7470A		
400-58219-8MS	Matrix Spike	т	Water	7470A		
400-58219-8MSD	Matrix Spike Duplicate	Т	Water	7470A		
400-58219-9	AJ 14	т	Water	7470A		
400-58219-10	AJ 15	Т	Water	7470A		

Job Number: 400-58219-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:400-13647	76				
LCS 400-136420/15-A	Lab Control Sample	Т	Water	7470A	400-136420
MB 400-136420/14-A	Method Blank	Т	Water	7470A	400-136420
400-58219-1	AJ 1	Т	Water	7470A	400-136420
400-58219-2	AJ 3	Т	Water	7470A	400-136420
400-58219-3	AJ 5	Т	Water	7470A	400-136420
400-58219-4	AJ 7	Т	Water	7470A	400-136420
400-58219-5	AJ 8	Т	Water	7470A	400-136420
400-58219-6	AJ 9	Т	Water	7470A	400-136420
400-58219-7	AJ 10	Т	Water	7470A	400-136420
400-58219-8	AJ 13	Т	Water	7470A	400-136420
400-58219-8MS	Matrix Spike	Т	Water	7470A	400-136420
400-58219-8MSD	Matrix Spike Duplicate	Т	Water	7470A	400-136420
400-58219-9	AJ 14	Т	Water	7470A	400-136420
400-58219-10	AJ 15	Т	Water	7470A	400-136420
Analysis Batch:400-13648	86				
LCS 400-136301/20-A	Lab Control Sample	Т	Solid	6010B	400-136301
MB 400-136301/19-A	Method Blank	Т	Solid	6010B	400-136301
LCS 400-136361/25-A	Lab Control Sample	Т	Water	6010B	400-136361
MB 400-136361/24-A	Method Blank	Т	Water	6010B	400-136361
400-58214-E-1-B MS	Matrix Spike	Т	Water	6010B	400-136361
400-58214-E-1-C MSD	Matrix Spike Duplicate	Т	Water	6010B	400-136361
400-58219-1	AJ 1	Т	Water	6010B	400-136361
400-58219-2	AJ 3	Т	Water	6010B	400-136361
400-58219-3	AJ 5	Т	Water	6010B	400-136361
400-58219-4	AJ 7	Т	Water	6010B	400-136361
400-58219-5	AJ 8	Т	Water	6010B	400-136361
400-58219-6	AJ 9	Т	Water	6010B	400-136361
400-58219-7	AJ 10	Т	Water	6010B	400-136361
400-58219-8	AJ 13	Т	Water	6010B	400-136361
400-58219-9	AJ 14	Т	Water	6010B	400-136361
400-58219-10	AJ 15	Т	Water	6010B	400-136361
400-58219-11	AJS 1	Т	Solid	6010B	400-136301
400-58219-12	AJS 4	Т	Solid	6010B	400-136301
400-58219-13	AJS 5	Т	Solid	6010B	400-136301
400-58219-14	AJS 3	Т	Solid	6010B	400-136301
400-58222-A-1-B MS	Matrix Spike	т	Solid	6010B	400-136301
400-58222-A-1-C MSD	Matrix Spike Duplicate	Т	Solid	6010B	400-136301

Job Number: 400-58219-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 400-136573					
LCS 400-136573/15-A	Lab Control Sample	Т	Solid	7471A	
MB 400-136573/14-A	Method Blank	Т	Solid	7471A	
400-58219-11	AJS 1	Т	Solid	7471A	
400-58219-12	AJS 4	Т	Solid	7471A	
400-58219-13	AJS 5	Т	Solid	7471A	
400-58219-14	AJS 3	Т	Solid	7471A	
400-58222-B-1-E MS	Matrix Spike	Т	Solid	7471A	
400-58222-B-1-F MSD	Matrix Spike Duplicate	Т	Solid	7471A	
Analysis Batch:400-13670	02				
LCS 400-136573/15-A	Lab Control Sample	Т	Solid	7471A	400-136573
MB 400-136573/14-A	Method Blank	Т	Solid	7471A	400-136573
400-58219-11	AJS 1	Т	Solid	7471A	400-136573
400-58219-12	AJS 4	Т	Solid	7471A	400-136573
400-58219-13	AJS 5	Т	Solid	7471A	400-136573
400-58219-14	AJS 3	Т	Solid	7471A	400-136573
400-58222-B-1-E MS	Matrix Spike	Т	Solid	7471A	400-136573
400-58222-B-1-F MSD	Matrix Spike Duplicate	Т	Solid	7471A	400-136573

Report Basis

T = Total

Quality Control Results

Client: CL Environmental

Job Number: 400-58219-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:700-104	116				
LCS 700-104116/4	Lab Control Sample	Т	Water	SM 4500 CN M	
LCSD 700-104116/5	Lab Control Sample Duplicate	Т	Water	SM 4500 CN M	
400-58219-1	AJ 1	Т	Water	SM 4500 CN M	
400-58219-2	AJ 3	Т	Water	SM 4500 CN M	
400-58219-3	AJ 5	Т	Water	SM 4500 CN M	
400-58219-4	AJ 7	Т	Water	SM 4500 CN M	
400-58219-5	AJ 8	Т	Water	SM 4500 CN M	
400-58219-6	AJ 9	Т	Water	SM 4500 CN M	
400-58219-7	AJ 10	Т	Water	SM 4500 CN M	
400-58219-8	AJ 13	Т	Water	SM 4500 CN M	
400-58219-9	AJ 14	Т	Water	SM 4500 CN M	
400-58219-10	AJ 15	Т	Water	SM 4500 CN M	
700-60198-A-2 MS	Matrix Spike	Т	Water	SM 4500 CN M	
700-60198-A-2 MSD	Matrix Spike Duplicate	Т	Water	SM 4500 CN M	
Analysis Batch:400-136	307				
400-58219-11	AJS 1	Т	Solid	Moisture	
400-58219-12	AJS 4	Т	Solid	Moisture	
400-58219-13	AJS 5	Т	Solid	Moisture	
400-58219-14	AJS 3	Т	Solid	Moisture	

Report Basis

T = Total

o-Terphenyl

Job Number: 400-58219-1

Method: FL-PRO Preparation: 3520C

49 - 143

Client: CL Environmental

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136356/17-A Water 1.0 08/02/2011 2038 08/01/2011 0932 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136495 400-136356 N/A mg/L	Instrument I Lab File ID: Initial Weigh Final Weigh Injection Vo	D: t/Volume: t/Volume: lume:	WALLE mb 1000 mL 1.9 mL 1 uL		
Analyte		Result Qual				RL		
C8-C40		ND	ND			0.14		
Surrogate		% Rec Acceptance L			eptance Lim	its		
n-C39 o-Terphenyl		65 20 - 75 49 -			20 - 176 49 - 143			
Lab Control Sar	nple - Batch: 400-136356			Method: F Preparatio	L-PRO n: 3520C			
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136356/16-A Water 1.0 08/02/2011 2048 08/01/2011 0932 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136495 400-136356 N/A mg/L	Instrument ID: V Lab File ID: Id Initial Weight/Volume: 1 Final Weight/Volume: 1 Injection Volume: 1		WALLE lcs 1000 mL 1.9 mL 1 uL		
Analyte		Spike Amount	Result	% Rec.	Limit		Qual	
C8-C40		3.40	2.82	83	41 -	133		
Surrogate		%	Rec	A	cceptance Li	mits		
n-C39		f	35		20 - 176			

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Method Blank - Batch: 400-136356

o-Terphenyl

Job Number: 400-58219-1

Client: CL Environmental

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136376/13-A Solid 1.0 08/02/2011 1132 08/01/2011 1044 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136407 400-136376 N/A mg/Kg	Instrument I Lab File ID: Initial Weigh Final Weigh Injection Vo	D: nt/Volume: t/Volume: lume:	WALLE mb 30.00 g 1.9 mL 1 uL	
Analyte		Res	ult	Qual RL			
C8-C40		ND		9.5			
Surrogate		%	Rec	Acceptance Limits			
n-C39 o-Terphenyl		65 69		37 - 138 50 - 121			
Lab Control San	nple - Batch: 400-136376			Method: F Preparatio	L-PRO n: 3550B		
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136376/12-A Solid 1.0 08/02/2011 1142 08/01/2011 1044 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136407 400-136376 N/A mg/Kg	Instrument ID: WALLE Lab File ID: Ics Initial Weight/Volume: 30.00 g Final Weight/Volume: 2.3 mL Injection Volume: 1 uL		WALLE Ics 30.00 g 2.3 mL 1 uL	
Analyte		Spike Amount	Result	% Rec.	Limit		Qual
C8-C40		113	90.0	79	50 -	124	
Surrogate		%	Rec	A	cceptance Lir	mits	
n-C39		6	30		37 - 138		

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Method: FL-PRO

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Preparation: 3550B

Method Blank - Batch: 400-136376

Quality Control Results

Job Number: 400-58219-1

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136376

Method: FL-PRO Preparation: 3550B

MS Lab Sample ID:	400-58219-14	Ana Ana	alysis Batch:	400-136407	Instrume	nt ID:	WALLE	
Client Matrix:	Solid	Pre	p Batch:	400-136376	Lab File	ID:	400-58219	-a-14-d
Dilution:	1.0	Lea	ach Batch:	N/A	Initial We	eight/Volume:	30.18 g	
Analysis Date:	08/02/2011 1251	l			Final We	ight/Volume:	2.4 mL	
Prep Date:	08/01/2011 1044	ł			Injection	Volume:	1 uL	
Leach Date:	N/A				-			
MSD Lab Sample ID	: 400-58219-14	Ana	alysis Batch:	400-136407	Instrume	nt ID:	WALLE	
Client Matrix:	Solid	Pre	p Batch:	400-136376	36376 Lab File ID:		400-58219	-а-14-е
Dilution:	1.0	Lea	ach Batch:	N/A	Initial We	eight/Volume:	30.26 g	
Analysis Date:	08/02/2011 1310)			Final We	ight/Volume:	2.5 mL	
Prep Date:	08/01/2011 1044	Ļ			Injection	Volume:	1 uL	
Leach Date:	N/A							
		9	% Rec.					
Analyte		MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C8-C40		67	63	11 - 154	6	50		
Surrogate			MS % Rec	MSD %	% Rec	Acc	eptance Limit	S
n-C39			54	54		3	37 - 138	
o-Terphenyl			62	63		Ę	50 - 121	
Matrix Spike/					Method:	FL-PRO		
Matrix Spike Duplicate Recovery Report - Batch: 400-1363					Preparati	on: 3550B		
		·						

MS Lab Sample ID:	400-58219-14	Units: mg/Kg	MSD Lab Sample ID:	400-58219-14
Client Matrix:	Solid		Client Matrix:	Solid
Dilution:	1.0		Dilution:	1.0
Analysis Date:	08/02/2011 1251		Analysis Date:	08/02/2011 1310
Prep Date:	08/01/2011 1044		Prep Date:	08/01/2011 1044
Leach Date:	N/A		Leach Date:	N/A

Analyte	Sample	MS Spike	MSD Spike	MS	MSD
	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
C8-C40	ND	132	132	87.9	82.7

Quality Control Results

Job Number: 400-58219-1

Client: CL Environmental

Method Blank - Batch: 400-136301

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136301/19-A Solid 1.0 08/02/2011 1528 07/29/2011 1637 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136486 400-136301 N/A mg/Kg	Instrument IE Lab File ID: Initial Weight Final Weight): /Volume: /Volume:	6500 ICP Du N/A .500 g 50 mL	0
Analyte		Res	ult	Qual		RL	
Arsenic		ND				0.50	
Cadmium		ND				0.50	
Lead		ND				0.50	
Lab Control Sar	nple - Batch: 400-136301			Method: 60 Preparatior	10B n: 3050B		
Lab Sample ID:	LCS 400-136301/20-A	Analysis Batch:	400-136486	Instrument ID):	6500 ICP Du	0
Client Matrix:	Solid	Prep Batch:	400-136301	Lab File ID:		N/A	
Dilution:	1.0	Leach Batch:	N/A	Initial Weight	/Volume:	.510 g	
Analysis Date:	08/02/2011 1531	Units:	mg/Kg	Final Weight	Volume:	50 mL	
Prep Date:	07/29/2011 1637						
Leach Date:	N/A						
Analyte		Spike Amount	Result	% Rec.	Limit		Qual
Arsenic		134	129	96	83 -	118	
Cadmium		83.3	81.8	98	84 -	116	
Lead		118	130	110	83 -	117	

400-136486 Instrument ID:

Method: 6010B

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Quality Control Results

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 400-136301					Method Prepara	Method: 6010B Preparation: 3050B			
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58222-A-1-B MS Solid 1.0 08/02/2011 1624 07/29/2011 1637 N/A	Ana Prej Lea	lysis Batch: o Batch: ch Batch:	n: 400-136486 Instrument ID: 400-136301 Lab File ID: N/A Initial Weight/Volume: Final Weight/Volume:		6500 ICP Duo N/A .535 g 50 mL			
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	: 400-58222-A-1-C MSD Solid 1.0 08/02/2011 1627 07/29/2011 1637 N/A	Ana Prej Lea	lysis Batch: 5 Batch: ch Batch:	400-136486 400-136301 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:		6500 ICP Duo N/A .526 g 50 mL		
Analyta		<u>%</u>	Rec.	Limit		DDD Limit	ME Our		
Analyte		1013	IVISD	LITIIL	RPD	RPD LIMI	INIS Qua		
Arsenic		82	85	75 - 125	3	20			
Cadmium		91	91	75 - 125	1	20			
Lead		98	98	75 - 125	1	20			
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report - B	atch: 4	00-136301		Method: Preparati	6010B on: 3050B			
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58222-A-1-B MS Solid 1.0 08/02/2011 1624 07/29/2011 1637 N/A	Units: mg/Kg		MSD Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:		400-58222-A-1-C MSD Solid 1.0 08/02/2011 1627 07/29/2011 1637 N/A			
Analyte		Sample Result/	e Qual	MS Spike Amount	MSD Spike Amount	MS Result/Q	Nual F	ISD Result/Qual	
Arsenic		57		108	110	145	1	50	
Cadmium		ND		54.0	54.9	49.5	5	0.2	
Lead		27		108	110	134	1	34	

Job Number: 400-58219-1

Client: CL Environmental

Method: 6010B Preparation: 3010A

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136361/24-A Water 1.0 08/02/2011 1228 08/01/2011 0946 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136486 400-136361 N/A mg/L	Instrument Lab File ID: Initial Weigl Final Weigh	ID: nt/Volume: t/Volume:	6500 ICP I N/A 50 mL 50 mL	Duo
Analyte		Res	sult	Qual		RI	L
Arsenic		ND				0.0	0050
Cadmium		ND				0.0	1050
Lead						0.0	050
Zinc		ND				0.0)20
Lab Control Sar	mple - Batch: 400-136361			Method: 6 Preparatio	010B on: 3010A		
Lab Sample ID:	LCS 400-136361/25-A	Analysis Batch:	400-136486	Instrument	ID:	6500 ICP I	Duo
Client Matrix:	Water	Prep Batch:	400-136361	Lab File ID:		N/A	
Dilution:	1.0	Leach Batch:	N/A	Initial Weigl	nt/Volume:	50 mL	
Analysis Date:	08/02/2011 1231	Units:	mg/L	Final Weigh	t/Volume:	50 mL	
Prep Date:	08/01/2011 0946						
Leach Date:	N/A						
Analyte		Spike Amount	Result	% Rec.	Limit		Qual
Arsenic		1.00	0.968	97	80 -	120	
Cadmium		0.500	0.499	100	80 -	120	
Copper		1.00	1.02	102	80 -	120	
Lead		1.00	0.985	98	80 -	120	
Zinc		1.00	0.984	98	- 08	120	

Lab Sample ID: MB 400-136361/24-A 400-136486 Instrument ID: Analysis Batch:

Method Blank - Batch: 400-136361
Quality Control Results

Job Number: 400-58219-1

Matrix Spike/ Matrix Spike Dupli	cate Recovery Report - B	atch: 40	0-136361		Method: Preparat	6010B tion: 3010A		
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58214-E-1-B MS Water 1.0 08/02/2011 1241 08/01/2011 0946 N/A	Anal Prep Leac	ysis Batch: Batch: h Batch:	400-136486 400-136361 N/A	Instrumer Lab File I Initial We Final Wei	nt ID: D: ight/Volume: ght/Volume:	6500 ICP I N/A 50 mL 50 mL	Duo
MSD Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58214-E-1-C MSD Water 1.0 08/02/2011 1244 08/01/2011 0946 N/A	Anal Prep Leac	ysis Batch: Batch: h Batch:	400-136486 400-136361 N/A	Instrumer Lab File I Initial We Final Wei	nt ID: D: ight/Volume: ght/Volume:	6500 ICP I N/A 50 mL 50 mL	Duo
Analyte		<u>%</u> MS	<u>Rec.</u> MSD	Limit	RPD	RPD I imit	MS Qual	MSD Qual
Arsenic Cadmium Copper Lead Zinc		98 101 104 101 100	97 99 102 99 99	75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125	1 2 2 2 2	20 20 20 20 20 20		
Matrix Spike/ Matrix Spike Dupli	cate Recovery Report - B	atch: 40	0-136361		Method: 6 Preparatio	6010B on: 3010A		
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58214-E-1-B MS Water 1.0 08/02/2011 1241 08/01/2011 0946 N/A	Un	its: mg/L		MSD Lab S Client Matr Dilution: Analysis Da Prep Date: Leach Date	Sample ID: ix: ate: 2:	400-58214-E- Water 1.0 08/02/2011 1 08/01/2011 0 N/A	1-C MSD 244 946
Analyte		Sample Result/0	Qual	MS Spike Amount	MSD Spike Amount	MS Result/Q	MSI ual Res) ult/Qual

Analyte	Result/Qual	Amount	Amount	ResulvQual	Result/Qual	
Arsenic	ND	1.00	1.00	0.978	0.967	
Cadmium	ND	0.500	0.500	0.504	0.495	
Copper	ND	1.00	1.00	1.04	1.02	
Lead	ND	1.00	1.00	1.01	0.992	
Zinc	0.022	1.00	1.00	1.03	1.01	

TestAmerica Pensacola

Client: CL Environmental

TestAmerica Pensacola

Quality Control Results

Job Number: 400-58219-1

Method: 7470A

Client: CL Environmental

Method Blank - Batch: 400-136420

				Preparation: 7470A	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136420/14-A Water 1.0 08/02/2011 1316 08/02/2011 0830 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136476 400-136420 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HW136420.PRN 40 mL 40 mL
Analyte		Resu	lt	Qual	RL
Mercury		ND			0.00020
Lab Control Sam	ble - Batch: 400-136420			Method: 7470A Preparation: 7470A	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136420/15-A Water 1.0 08/02/2011 1318 08/02/2011 0830 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136476 400-136420 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HW136420.PRN 40 mL 40 mL
Analyte		Spike Amount	Result	% Rec. Limit	Qual
Mercury		0.00100	0.000979	98 80 -	120
Matrix Spike/ Matrix Spike Dupl	licate Recovery Report - E	3atch: 400-136420		Method: 7470A Preparation: 7470A	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58219-8 Water 1.0 08/02/2011 1419 08/02/2011 0830 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136476 400-136420 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HW136420.PRN 40 mL 40 mL
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	0: 400-58219-8 Water 1.0 08/02/2011 1424 08/02/2011 0830 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136476 400-136420 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HW136420.PRN 40 mL 40 mL
Analyte		<u>% Rec.</u> MS MSD	Limit	RPD RPD Limit	MS Qual MSD Qual
Mercury		105 103	85 - 115	1 20	

Quality Control Results

Job Number: 400-58219-1

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136420

Method: 7470A Preparation: 7470A

MS Lab Sample ID:	400-58219-8	Units:	mg/L		MSD Lab Sam	ple ID:	400-58219-8	
Client Matrix:	Water				Client Matrix:		Water	
Dilution:	1.0				Dilution:		1.0	
Analysis Date:	08/02/2011 1419				Analysis Date:		08/02/2011 1	1424
Prep Date:	08/02/2011 0830				Prep Date:		08/02/2011 (0830
Leach Date:	N/A	Leach Date:		Leach Date:		N/A		
		Sample	N	IS Spike	MSD Spike	MS	MS	D

Analyte	Sample	MS Spike	MSD Spike	MS	MSD
	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Mercury	ND	0.00200	0.00200	0.00209	0.00206

TestAmerica Pensacola

Quality Control Results

Method: 7471A Preparation: 7471A

Job Number: 400-58219-1

Client: CL Environmental

Method Blank - Batch: 400-136573

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136573/14-A Solid 1.0 08/05/2011 1131 08/05/2011 0800 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136702 400-136573 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136573A.PRN .6000 g 40 mL	
Analyte		Resu	It	Qual	RL	
Mercury		ND			0.013	
Lab Control Samp	ole - Batch: 400-136573			Method: 7471A Preparation: 7471A		
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136573/15-A Solid 10 08/05/2011 1132 08/05/2011 0800 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136702 400-136573 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136573A.PRN .2060 g 40 mL	
Analyte		Spike Amount	Result	% Rec. Limit	Qual	
Mercury		7.47	7.07	95 80 -	· 120	
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report - B	atch: 400-136573		Method: 7471A Preparation: 7471A		
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58222-B-1-E MS Solid 1.0 08/05/2011 1154 08/05/2011 0800 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136702 400-136573 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136573A.PRN .6055 g 40 mL	
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	: 400-58222-B-1-F MSD Solid 1.0 08/05/2011 1155 08/05/2011 0800 N/A	Analysis Batch:400-136702Prep Batch:400-136573Leach Batch:N/A		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136573A.PRN .6096 g 40 mL	
Analita		<u>% Rec.</u>	1 : :4			
Analyte		MS MSD	Limit	RPD RPD LIMIt	MS Quai MSD Qual	
Mercury		109 98	80 - 120	6 20		

Quality Control Results

Job Number: 400-58219-1

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136573

Method: 7471A Preparation: 7471A

MS Lab Sample ID:	400-58222-B-1-E MS	Units:	mg/Kg	MSD Lab Sample ID:	400-58222-B-1-F MSD
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	08/05/2011 1154			Analysis Date:	08/05/2011 1155
Prep Date:	08/05/2011 0800			Prep Date:	08/05/2011 0800
Leach Date:	N/A			Leach Date:	N/A
		o .			MOD

	Sample	MS Spike	MSD Spike	MS	MSD
Analyte	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Mercury	0.13	0.153	0.152	0.295	0.277

Thiocyanate

Quality Control Results

Job Number: 400-58219-1

Client: CL Environmental

Method Reporting Limit Check - Batch: 700-104116

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date: Analyte	MRL 700-104116/3 Water 1.0 08/04/2011 1402 N/A N/A	Analysis Bat Prep Batch: Leach Batch Units: Spike Amour	ch: :	700-104116 N/A M/A mg/L Result	Instrumer Lab File II Initial Wei Final Wei % Rec.	nt ID: D: ight/Volume: ght/Volume: Limi	KONELA DATA08. 10 mL 10 mL	B 04.11A1SCN. Qual	
Thiocvanate		0.100		ND	77	2		Quu	
Lab Control Sam Lab Control Sam	ble/ ble Duplicate Recovery	Report - Batch	: 700-1	104116	Method: Preparat	SM 4500 C tion: N/A	NM		
LCS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 700-104116/4 Water 1.0 08/04/2011 1402 N/A N/A	Analysis I Prep Bato Leach Ba Units:	Batch: ch: tch:	700-104116 N/A N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:		KONELA DATA08. 10 mL 10 mL	KONELAB DATA08.04.11A1SCN. 10 mL 10 mL	
LCSD Lab Sample II Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	D: LCSD 700-104116/5 Water 1.0 08/04/2011 1402 N/A N/A	Analysis I Prep Bato Leach Ba Units:	Batch: ch: tch:	700-104116 N/A N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:		KONELA DATA08. 10 mL 10 mL	B 04.11A1SCN.	
Analyte		<u>% F</u> LCS	<u>Rec.</u> LCSD	Limit	RPD	RPD Lim	it LCS Qua	I LCSD Qual	
Thiocyanate		103	102	80 - 120	1.3	25.0			
Laboratory Contro Laboratory Duplic	ol/ ate Data Report - Batch	: 700-104116			Method: S Preparatio	6M 4500 CN on: N/A	M		
LCS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 700-104116/4 Water 1.0 08/04/2011 1402 N/A N/A	Units:	mg/L		LCSD Lab Client Matri Dilution: Analysis Da Prep Date: Leach Date	Sample ID: ix: ate: ::	LCSD 700-1 Water 1.0 08/04/2011 N/A N/A	04116/5 1402	
Analyte		LCS Spike Amount		LCSD Spike Amount	LCS Resi	ult/Qual	LCSD Resul	t/Qual	

			Preparation	: N/A	
	Analysis Batch:700-104116Prep Batch:N/ALeach Batch:N/AUnits:mg/L		Instrument ID: Lab File ID: Initial Weight/\ Final Weight/\	KONELAB DATA08.04.11 10 mL 10 mL	
	Spike Amount	Result	% Rec.	Limit	
	0.100	ND	77		
y R	eport - Batch: 700	-104116	Method: SM Preparation	4500 CN : N/A	Μ
	Analysis Batch: Prep Batch: Leach Batch: Units:	700-104116 N/A N/A mg/L	Instrument ID: Lab File ID: Initial Weight/\ Final Weight/\	: Volume: /olume:	KONELAB DATA08.04.11 10 mL 10 mL
	Analysis Batch: Prep Batch: Leach Batch:	700-104116 N/A N/A	Instrument ID: Lab File ID: Initial Weight/	: Volume:	KONELAB DATA08.04.11 10 mL

Method: SM 4500 CN M

1.00

1.04

1.02

1.00

Quality Control Results

Job Number: 400-58219-1

Method: SM 4500 CN M Preparation: N/A

MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	700-60198-A-2 MS Water 1.0 08/04/2011 1402 N/A N/A	Analı Prep Leac	ysis Batch: Batch: h Batch:	700-104116 N/A N/A	Instrumer Lab File I Initial We Final We	nt ID: ID: ight/Volume: ight/Volume:	KONELA DATA08. 10 mL 10 mL	3 04.11A1SCN.
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	2: 700-60198-A-2 MSD Water 1.0 08/04/2011 1402 N/A N/A	Analı Prep Leac	ysis Batch: Batch: h Batch:	700-104116 N/A N/A	Instrumer Lab File I Initial We Final We	nt ID: ID: ight/Volume: ight/Volume:	KONELA DATA08. 10 mL 10 mL	3 04.11A1SCN.
Analyte		<u>%</u> MS	<u>Rec.</u> MSD	Limit	RPD	RPD Limit	t MS Qual	MSD Qual
Thiocyanate		113	113	75 - 125	0	25		
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report -	Batch: 70	0-104116		Method: S Preparati	SM 4500 CN on: N/A	ΝΜ	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	700-60198-A-2 MS Water 1.0 08/04/2011 1402 N/A N/A	Uni	its: mg/L		MSD Lab S Client Matr Dilution: Analysis D Prep Date: Leach Date	Sample ID: ix: ate: e:	700-60198-A Water 1.0 08/04/2011 N/A N/A	-2 MSD 1402
Analyte		Sample Result/C	Qual	MS Spike Amount	MSD Spike Amount	MS Result/Q	MS Qual Re	SD sult/Qual
Thiocyanate		0.25		1.00	1.00	1.38	1.3	8

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 700-104116

DATA REPORTING QUALIFIERS

Lab Section

Qualifier

Description

FDEP Facility No.	Sampling CompQAP No			FLORIDA 33081-4407					はんじ Sample Condition as Received	PERFORMED JULY TempC	Lot Number of Sampling Containers Used									or applicable fees)			Q / E / D		EAS ARE FOR LAB USE ONLY
7-592ig		Pink - Sampler Copy		07, HOLLYWOOD,	Site Location:			\$	YSIS REQUIRED	IE OR METHOD NUMBER OF ED IN LARGE BOXES BELOW. APLE ITEMS NEED EACH TEST	Lead) Zinc) Mercan				<u>}</u>					Yes No (See price guide t	Other (specify)	DUE DATE REQUESTED Confirmation #	Coating Code:	Misc. Charges	SHADED AF
TICAL GROUP U() 2-770.900 (modified form))	HOLLYWOOD, FLORIDA 3302 • CELLULAR: 954-494-3272		rt To Address:	Address: P.O. BOX 8144				ler's Signature	ANA	PLACE NAN TESTS NEEL (/) CHECK OFF WHICH SAI	TPH Thiougarde, Cuanide Cadmilian)			QA/QC Report Needed7:	Report Format: Standard	Date:	Time:	Date: 29/11	Time. 10277
ERNATIONAL ANALY SUSTODY RECORD (DEP 6	00D BOULEVARD, SUITE 301, 1-894-4023 • FAX: 954-894-4501	Yellow - Lab Copy	Repo	AG) Billing		5 371 2267 FAX	FAX:	Samp	K SAMPLE LÓCATION/ # JOB DESCRIPTION	C (optional if needed N when samples are from T	different site locations) A – – – – R R E E	<i>h</i>	6	22		3				Total # of Containers: $2f_{0}$	المسالح المسالحة المس	nquished by Signature:	νν:	eived by Signature:	ny: V
CHAIN OF C	5555 HOLLYW0 PHONE: 954	w/ Report		TICAL GROUP (I	•	Phone: 871	Phone:		E C	H A S C S C S C S C S C S C S C S C S C S	∾#¥88%	M,7		25		WS N		500	2 V	14 m	2 Ceulange	е: J J // (2) Reli	n¢: / Compa	.e: (2) Rec	le: Compa
		Original - Return		NATIONAL ANALY	tus an	For U Careba		THAN CRE		DATE TIME		125 11 19:45	5:11, 1-1	x # 5	~	~ 12:30	~ 12: 40	× 4 · 50	et in	Purail NO	~ / PANIN	UL I Da	<u>ب</u>	D	Ţ
ssion Code:	dinase.		ort To:		sct Number/Name:	ect Contact: (Call	nate Contact:	pled By (print): NMF		SAMPLE ID		AT1 J	AT 3	A15	T CY	ATO	-01 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		4115	al Comments:		linquished by Signature:	any: C C	ceived by Signature:	any:

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International analytical GROUP CHAIN OF CUSTODY RECORD (DEP 62-770-900 (modified form)) CHAIN OF CUSTODY RECORD (DEP 62-770-900 (modified form)) Resolution (modified form) Resolution (modified form) Organis - Runnin (Report Resolution (modified form) Name Name (Last 3) Name Resolution (modified form) Name Resolution (modified form) Organis - Runnin (Report Resolution (modified form) Name Resolution (modified form) Resolution (modified for (modified form) Resolution (modified for (modified for (modified for (modified for (modified form) Name Resolution (modified	2214 FDEP Facility No.	Sampling CompQAP No. Approval Date:	ik - Sampler Copy		DLLYWOOD, FLORIDA 33081-4407	ocation:				EQUIRED (ハ, イン Sample Condition	HOD NUMBER OF GE BOXES BELOW. S NEED EACH TEST PERFORMED Sealed Yes No	Lot Number of Sampling Containers Used						(See price guide for applicable fees)	Other (specify)	: DATE REQUESTED: firmation #	ting Code:Q / .t. /-D	. Charges	
International Analy CHAIN OF CUSTODY RECORD (DEP 6 5555 HOLLWOOD BOULEVARD. SUITE 301, 5555 HOLLWOOD BOULEVARD. SUITE 301, 5555 HOLLWOOD BOULEVARD. SUITE 301, 5555 HOLLWOOD BOULEVARD. SUITE 301, PHONE. 354-894-4003 • FAX: 954-894-4001 NAL ANALYTICAL GROUP (IAG) Rew MAIL ANALYTICAL GROUP (IAG) Billin MAL ANALYTICAL GROUP (IAG) Billin MAL ANALYTICAL GROUP (IAG) Billin MAL ANALYTICAL GROUP (IAG) Billin MACATIFICAL GROUP (IAG) Billin MAL ANALYTICAL GROUP (IAG) Billin MACATIFIC Billin MARIX MARTIX MAL Curr Billin MARIX Sample Locations) Phone: Phone: MAL Curr Billin Distribution Contractions Billin Billin Billin Billin Billin Billin Billin Billin Billin Billin Billin Billin Billin Billin <td>TICAL GROUP しの- ら</td> <td>HOLLYWOOD, FLORIDA 33021 • CELLULAR: 954-494-3272</td> <td>Pin</td> <td>rt To Address:</td> <td>g Address: P.O. BOX 814407, HO</td> <td>Site Lo</td> <td></td> <td></td> <td>bler's Signature M</td> <td>ANALYSIS RE</td> <td>PLACE NAME OR METH TESTS NEEDED IN LARG (v) CHECK OFF WHICH SAMPLE ITEMS</td> <td>Lead Cadmiun Arsenic, Meany, Cyanide ToH</td> <td></td> <td>)</td> <td>)))</td> <td></td> <td></td> <td>QA/QC Report Needed?: Yes No</td> <td>Report Format: Standard</td> <td>Date: DUE Confi</td> <td>Time:</td> <td></td> <td></td>	TICAL GROUP しの- ら	HOLLYWOOD, FLORIDA 33021 • CELLULAR: 954-494-3272	Pin	rt To Address:	g Address: P.O. BOX 814407, HO	Site Lo			bler's Signature M	ANALYSIS RE	PLACE NAME OR METH TESTS NEEDED IN LARG (v) CHECK OFF WHICH SAMPLE ITEMS	Lead Cadmiun Arsenic, Meany, Cyanide ToH))))			QA/QC Report Needed?: Yes No	Report Format: Standard	Date: DUE Confi	Time:		
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	CHAII	5555 H(Original - Return w/ Report		NAL ANALYTICAL GRO	try an	n Campbell Phot	Pho	athen Lee	о ⊢ ш	D COLLECTED C D N		11 01: 300m	N,C)	2,30			(results to clour	() cinfam	11 52/ Gied	Time:/	Date:	

Client: CL Environmental

Login Number: 58219 List Number: 1

Creator: Hor, Koma

Job Number: 400-58219-1

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	True	18.6°C, 17.4°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Client: CL Environmental

Login Number: 58219 List Number: 1

Creator: Nou, Toum N

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7C # 3509
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-58219-1

List Creation: 07/30/11 09:17 AM



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-58219-2 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-58219-2 Job Description: AusJam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elwared

Approved for release. Marty Edwards Senior Project Manager 8/1/2011 10:37 AM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 08/01/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc. TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514 Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com



Job Narrative 400-58219-2

Comments

No additional comments.

Receipt

All samples were received in good condition @ 18.6°C, 17.4°C.

General Chemistry

No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: CL Environmental

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method	
400-58219-1 Cyanide, Total	AJ 1	32		0.50	mg/L	335.2	
400-58219-2 Cyanide, Total	AJ 3	43		0.50	mg/L	335.2	
400-58219-3 Cyanide, Total	AJ 5	42		0.50	mg/L	335.2	
400-58219-4 Cyanide, Total	AJ 7	40		0.50	mg/L	335.2	
400-58219-5 Cyanide, Total	AJ 8	31		0.50	mg/L	335.2	
400-58219-6 Cyanide, Total	AJ 9	0.024		0.0050	mg/L	335.2	
400-58219-7 Cyanide, Total	AJ 10	0.0079		0.0050	mg/L	335.2	
400-58219-8 Cyanide, Total	AJ 13	0.043		0.0050	mg/L	335.2	
400-58219-9 Cyanide, Total	AJ 14	0.010		0.0050	mg/L	335.2	
400-58219-10 Cyanide, Total	AJ 15	40		0.50	mg/L	335.2	
400-58219-11 Cyanide, Total	AJS 1	23		0.41	mg/Kg	9014	
400-58219-12 Cyanide, Total	AJS 4	170		3.6	mg/Kg	9014	

EXECUTIVE SUMMARY - Detections

Client: CL Environmental

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method	
400-58219-13 Cyanide, Total	AJS 5	7.9		0.32	mg/Kg	9014	
400-58219-14 Cyanide, Total	AJS 3	8.0		0.29	mg/Kg	9014	

METHOD SUMMARY

Client: CL Environmental

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Cyanide	TAL PEN	SW846 9014	
Cyanide, Distillation			SW846 9010B
Matrix Water			
Cyanide	TAL PEN	EPA 335.2	
Distillation, Cyanide			Distill/CN
Lab References:			
TAL PEN = TestAmerica Pensacola			
Method References:			

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Method	Analyst	Analyst ID
EPA 335.2	Brooks, Barbara	BB
SW846 9014	Brooks, Barbara	BB

Client: CL Environmental

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
400-58219-1	AJ 1	Water	07/25/2011 1145	07/29/2011 1027
400-58219-2	AJ 3	Water	07/25/2011 1150	07/29/2011 1027
400-58219-3	AJ 5	Water	07/25/2011 1155	07/29/2011 1027
400-58219-4	AJ 7	Water	07/25/2011 1000	07/29/2011 1027
400-58219-5	AJ 8	Water	07/25/2011 1020	07/29/2011 1027
400-58219-6	AJ 9	Water	07/25/2011 1230	07/29/2011 1027
400-58219-7	AJ 10	Water	07/25/2011 1240	07/29/2011 1027
400-58219-8	AJ 13	Water	07/25/2011 0930	07/29/2011 1027
400-58219-9	AJ 14	Water	07/25/2011 0930	07/29/2011 1027
400-58219-10	AJ 15	Water	07/25/2011 1140	07/29/2011 1027
400-58219-11	AJS 1	Solid	07/25/2011 0930	07/29/2011 1027
400-58219-12	AJS 4	Solid	07/25/2011 1000	07/29/2011 1027
400-58219-13	AJS 5	Solid	07/25/2011 1030	07/29/2011 1027
400-58219-14	AJS 3	Solid	07/25/2011 1100	07/29/2011 1027

SAMPLE RESULTS

Client: CL Environmental

	General Chemistry											
Client Sample ID:	AJ 1											
Lab Sample ID:	400-58219-1					Date Sampled	: 07/25/2011 1145					
Client Matrix:	Water					Date Received	d: 07/29/2011 1027					
Analyte	I	Result	Qual	Units	RL	Dil	Method					
Cyanide, Total	:	32		mg/L	0.50	100	335.2					
	Analysis Batch: 400-136	5302	Analysis Date:	07/29/2011 1640								
	Prep Batch: 400-13618	5	Prep Date: 07/2	29/2011 1345								

Client: CL Environmental

			General Chemistry			
Client Sample ID:	AJ 3					
Lab Sample ID:	400-58219-2			Date	e Sampled	: 07/25/2011 1150
Client Matrix:	Water			Date	e Received	d: 07/29/2011 1027
Analyte	R	esult Qi	ual Units	RL	Dil	Method
Cyanide, Total	43	3	mg/L	0.50	100	335.2
	Analysis Batch: 400-1363	02 Analysis D	ate: 07/29/2011 1833	3		
	Prep Batch: 400-136185	Prep Date:	07/29/2011 1345			

Client: CL Environmental

		Gen	eral Chemistry			
Client Sample ID:	AJ 5					
Lab Sample ID:	400-58219-3			Date	Sampled	I: 07/25/2011 1155
Client Matrix:	Water			Date	Receive	d: 07/29/2011 1027
Analyte	Re	sult Qual	Units	RL	Dil	Method
Cyanide, Total	42		mg/L	0.50	100	335.2
	Analysis Batch: 400-13630	02 Analysis Date:	07/29/2011 1835			
	Prep Batch: 400-136185	Prep Date: 07/	29/2011 1345			

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 7							
Lab Sample ID:	400-58219-4				Da	ite Sampled	: 07/25/2011 1000	
Client Matrix:	Water				Da	ate Received	d: 07/29/2011 1027	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		40		mg/L	0.50	100	335.2	
	Analysis Batch: 400-136	6302	Analysis Date: (07/29/2011 1835				
	Prep Batch: 400-13618	5	Prep Date: 07/2	9/2011 1345				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 8							
Lab Sample ID:	400-58219-5					Date Sampled	: 07/25/2011 1020	
Client Matrix:	Water					Date Received	d: 07/29/2011 1027	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		31		mg/L	0.50	100	335.2	
	Analysis Batch: 400-1	36302	Analysis Date:	07/29/2011 1835				
	Prep Batch: 400-1361	85	Prep Date: 07/2	29/2011 1345				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 9							
Lab Sample ID:	400-58219-6				Γ	Date Sampled	d: 07/25/2011 1230	
Client Matrix:	Water				ſ	Date Receive	d: 07/29/2011 1027	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		0.024		mg/L	0.0050	1.0	335.2	
	Analysis Batch: 400-1	36302	Analysis Date:	07/29/2011 1643				
	Prep Batch: 400-1361	185	Prep Date: 07/2	29/2011 1345				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 10							
Lab Sample ID:	400-58219-7					Date Sampled	d: 07/25/2011 124	10
Client Matrix:	Water					Date Receive	d: 07/29/2011 102	27
Analyte	Re	esult	Qual	Units	RL	Dil	Method	
Cyanide, Total	0.0	0079		mg/L	0.0050	1.0	335.2	_
	Analysis Batch: 400-1363	02	Analysis Date:	07/29/2011 1643				
	Prep Batch: 400-136185		Prep Date: 07/2	29/2011 1345				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 13							
Lab Sample ID:	400-58219-8					Date Sampled	1: 07/25/2011 0930	
Client Matrix:	Water					Date Receive	d: 07/29/2011 1027	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		0.043		mg/L	0.0050	1.0	335.2	
	Analysis Batch: 400-1	136302	Analysis Date:	07/29/2011 1643				
	Prep Batch: 400-136	185	Prep Date: 07/2	29/2011 1345				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 14							
Lab Sample ID:	400-58219-9				I	Date Sampled	d: 07/25/2011 0930	
Client Matrix:	Water				I	Date Receive	d: 07/29/2011 1027	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		0.010		mg/L	0.0050	1.0	335.2	
	Analysis Batch: 400-7	136302	Analysis Date:	07/29/2011 1643				
	Prep Batch: 400-136	185	Prep Date: 07/2	29/2011 1345				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 15							
Lab Sample ID:	400-58219-10					Date Sampled	: 07/25/2011 1140	
Client Matrix:	Water					Date Received	d: 07/29/2011 1027	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		40		mg/L	0.50	100	335.2	
	Analysis Batch: 400-1	36302	Analysis Date:	07/29/2011 1756				
	Prep Batch: 400-1361	185	Prep Date: 07/2	29/2011 1345				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJS 1							
Lab Sample ID:	400-58219-11				Da	ate Sample	d: 07/25/2011 0930	
Client Matrix:	Solid		% Moisture: 39.4		Date Received: 07/29/2011 1027			
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		23		mg/Kg	0.41	1.0	9014	
	Analysis Batch: 400-1	Analysis Batch: 400-136304		Analysis Date: 07/29/2011 1826			DryWt Corrected: Y	
	Prep Batch: 400-1362	230	Prep Date: 07/2	29/2011 0855				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJS 4							
Lab Sample ID:	400-58219-12			Date Sample	d: 07/25/2011 1000			
Client Matrix:	Solid	% Moisture: 29.6		Date Received: 07/29/2011 1027				
Analyte	Resu	lt Qual Units	RL	Dil	Method			
Cyanide, Total	170	mg/Kg	3.6	10	9014			
	Analysis Batch: 400-136304	Analysis Date: 07/29/2011 1926			DryWt Corrected: Y			
	Prep Batch: 400-136230	Prep Date: 07/29/2011 0855						

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJS 5							
Lab Sample ID:	400-58219-13			Date Sampled: 07/25/2011 1030				
Client Matrix:	Solid	% Moisture:	22.4	Date Received: 07/29/2011 1027				
Analyte	Res	ult Qual Units	RL	Dil Method				
Cyanide, Total	7.9	mg/Kg	g 0.32	1.0 9014				
	Analysis Batch: 400-136304	Analysis Date: 07/29/2	011 1826	DryWt Corrected: Y				
	Prep Batch: 400-136230	Prep Date: 07/29/2011	0855					

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJS 3							
Lab Sample ID:	400-58219-14					Date Sample	d: 07/25/2011 1100	
Client Matrix:	Solid		% Moist	ure: 14.6		Date Received: 07/29/2011 102		
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		8.0		mg/Kg	0.29	1.0	9014	
	Analysis Batch: 400-13	36304	Analysis Date: 07/29/2011 1826				DryWt Corrected: Y	
	Prep Batch: 400-13623	30	Prep Date: 07/2	29/2011 0855				

QUALITY CONTROL RESULTS
Quality Control Results

Client: CL Environmental

Job Number: 400-58219-2

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 400-136185					
LCS 400-136185/2-A	Lab Control Sample	Т	Water	Distill/CN	
MB 400-136185/1-A	Method Blank	Т	Water	Distill/CN	
400-58168-B-1-B MS	Matrix Spike	Т	Water	Distill/CN	
400-58168-B-1-C MSD	Matrix Spike Duplicate	Т	Water	Distill/CN	
400-58219-1	AJ 1	Т	Water	Distill/CN	
400-58219-2	AJ 3	Т	Water	Distill/CN	
400-58219-3	AJ 5	Т	Water	Distill/CN	
400-58219-4	AJ 7	т	Water	Distill/CN	
400-58219-5	AJ 8	Т	Water	Distill/CN	
400-58219-6	AJ 9	т	Water	Distill/CN	
400-58219-7	AJ 10	т	Water	Distill/CN	
400-58219-8	AJ 13	Т	Water	Distill/CN	
400-58219-8DU	Duplicate	Т	Water	Distill/CN	
400-58219-9	AJ 14	Т	Water	Distill/CN	
400-58219-10	AJ 15	Т	Water	Distill/CN	
Prep Batch: 400-136230					
LCS 400-136230/2-A	Lab Control Sample	Т	Solid	9010B	
MB 400-136230/1-A	Method Blank	Т	Solid	9010B	
400-58168-A-3-C MS	Matrix Spike	Т	Solid	9010B	
400-58168-A-3-D MSD	Matrix Spike Duplicate	Т	Solid	9010B	
400-58219-11	AJS 1	Т	Solid	9010B	
400-58219-12	AJS 4	Т	Solid	9010B	
400-58219-13	AJS 5	Т	Solid	9010B	
400-58219-14	AJS 3	Т	Solid	9010B	
Analysis Batch:400-1363	02				
LCS 400-136185/2-A	Lab Control Sample	Т	Water	335.2	400-136185
MB 400-136185/1-A	Method Blank	Т	Water	335.2	400-136185
400-58168-B-1-B MS	Matrix Spike	Т	Water	335.2	400-136185
400-58168-B-1-C MSD	Matrix Spike Duplicate	Т	Water	335.2	400-136185
400-58219-1	AJ 1	Т	Water	335.2	400-136185
400-58219-2	AJ 3	Т	Water	335.2	400-136185
400-58219-3	AJ 5	Т	Water	335.2	400-136185
400-58219-4	AJ 7	Т	Water	335.2	400-136185
400-58219-5	AJ 8	Т	Water	335.2	400-136185
400-58219-6	AJ 9	Т	Water	335.2	400-136185
400-58219-7	AJ 10	Т	Water	335.2	400-136185
400-58219-8	AJ 13	Т	Water	335.2	400-136185
400-58219-8DU	Duplicate	Т	Water	335.2	400-136185
400-58219-9	AJ 14	Т	Water	335.2	400-136185
400-58219-10	AJ 15	Т	Water	335.2	400-136185

Quality Control Results

Client: CL Environmental

Job Number: 400-58219-2

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:400-136304					
LCS 400-136230/2-A	Lab Control Sample	Т	Solid	9014	400-136230
MB 400-136230/1-A	Method Blank	Т	Solid	9014	400-136230
400-58168-A-3-C MS	Matrix Spike	Т	Solid	9014	400-136230
400-58168-A-3-D MSD	Matrix Spike Duplicate	Т	Solid	9014	400-136230
400-58219-11	AJS 1	Т	Solid	9014	400-136230
400-58219-12	AJS 4	Т	Solid	9014	400-136230
400-58219-13	AJS 5	Т	Solid	9014	400-136230
400-58219-14	AJS 3	Т	Solid	9014	400-136230

Report Basis

T = Total

TestAmerica Pensacola

Quality Control Results

Job Number: 400-58219-2

Method: 335.2

Client: CL Environmental

Method Blank - Batch: 400-136185

				Freparation: Di	I: DISTIII/CN					
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136185/1-A Water 1.0 07/29/2011 1502 07/28/2011 1345 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136302 400-136185 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	KONELAB N/A ume: 50 mL ume: 50 mL					
Analyte		Resu	t	Qual	RL					
Cyanide, Total		ND			0.0	050				
Lab Control Samı	ole - Batch: 400-136185			Method: 335.2 Preparation: Di	still/CN					
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136185/2-A Water 1.0 07/29/2011 1403 07/28/2011 1345 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136302 400-136185 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	KONELAB N/A ume: 50 mL ime: 50 mL					
Analyte		Spike Amount	Result	% Rec.	Limit	Qual				
Matrix Spike/ Matrix Spike Dupl	licate Recovery Report - E	Batch: 400-136185	0.044	Method: 335.2 Preparation: Di	still/CN					
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58168-B-1-B MS Water 1.0 07/29/2011 1403 07/28/2011 1345 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136302 400-136185 N/A	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	KONELAB N/A ume: 50 mL ume: 50 mL					
MSD Lab Sample ID	0: 400-58168-B-1-C MSD	Analysis Batch: Pren Batch:	400-136302 400-136185	Instrument ID: Lab File ID:	KONELAB N/A					
Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	Water 1.0 07/29/2011 1408 07/28/2011 1345 N/A	Leach Batch:	N/A	Initial Weight/Volu Final Weight/Volu	ume: 50 mL ume: 50 mL					
Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date: Analyte	Water 1.0 07/29/2011 1408 07/28/2011 1345 N/A	<u>% Rec.</u>	N/A	Initial Weight/Volu Final Weight/Volu	ume: 50 mL ime: 50 mL	MSD Qual				

Quality Control Results

Job Number: 400-58219-2

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136185

Method: 335.2 Preparation: Distill/CN

MS Lab Sample ID:	400-58168-B-1-B MS	Units: mg/L	MSD Lab Sample ID:	400-58168-B-1-C MSD
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Analysis Date:	07/29/2011 1403		Analysis Date:	07/29/2011 1408
Prep Date:	07/28/2011 1345		Prep Date:	07/28/2011 1345
Leach Date:	N/A		Leach Date:	N/A

Analyte	Sample	MS Spike	MSD Spike	MS	MSD
	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Cyanide, Total	ND	0.200	0.200	0.184	0.189

Duplicate - Batch: 400-136185

Method: 335.2 Preparation: Distill/CN

Lab Sample ID:	400-58219-8	Analysis Batch:	400-136302		Instrument I	D:	KONELAB	
Client Matrix:	Water	Prep Batch:	400-136185		Lab File ID:		N/A	
Dilution:	1.0	Leach Batch:	N/A		Initial Weigh	t/Volume:	50 mL	
Analysis Date:	07/29/2011 1643	Units:	mg/L		Final Weight	/Volume:	50 mL	
Prep Date:	07/29/2011 1345							
Leach Date:	N/A							
Analyte		Sample Result/Q	ual	Result		RPD	Limit	Qual
Cyanide, Total		0.043		0.0211		69	36	F

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Quality Control Results

Job Number: 400-58219-2

Method: 9014

Client: CL Environmental

Method Blank - Batch: 400-136230

				Preparation: 9010B	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136230/1-A Solid 1.0 07/29/2011 1403 07/29/2011 0855 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136304 400-136230 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
Analyte		Resu	It	Qual	RL
Cyanide, Total		ND			0.25
Lab Control Samp	ole - Batch: 400-136230			Method: 9014 Preparation: 9010B	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136230/2-A Solid 1.0 07/29/2011 1403 07/29/2011 0855 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136304 400-136230 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
Analyte		Spike Amount	Result	% Rec. Limit	Qual
Cyanide, Total		17.3	17.8	103 85 -	115
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report - B	atch: 400-136230		Method: 9014 Preparation: 9010B	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58168-A-3-C MS Solid 1.0 07/29/2011 1403 07/29/2011 0855 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136304 400-136230 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	ISD Lab Sample ID: 400-58168-A-3-D MSD Nient Matrix: Solid Nultion: 1.0 Inalysis Date: 07/29/2011 Prep Date: 07/29/2011 each Date: N/A		400-136304 400-136230 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
Analyte		<u>% Rec.</u> MS MSD	Limit	RPD RPD Limit	MS Qual MSD Qual
Cyanide, Total		101 96	57 - 136	5 20	

Quality Control Results

Client: CL Environmental

Matrix Spike/ Matrix Spike Duplic	cate Recovery Report - I	Batch: 400-1	36230		Method: 90 Preparatio)14 n: 9010B			
MS Lab Sample ID:	400-58168-A-3-C MS	Units:	mg/Kg		MSD Lab Sa	ample ID:	400-58 ⁻	168-A-3-[D MSD
Client Matrix:	Solid				Client Matrix		Solid		
Dilution:	1.0				Dilution:		1.0		
Analysis Date:	07/29/2011 1403				Analysis Dat	te:	07/29/2	011 140	3
Prep Date:	07/29/2011 0855				Prep Date:		07/29/2	011 085	5
Leach Date:	N/A				Leach Date:		N/A		
		Sample		MS Spike	MSD Spike	MS		MSD	

	Sample	IVIS Spike	NISD SPIKE	1013	IVISD
Analyte	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Cyanide, Total	ND	11.7	11.7	11.8	11.2

DATA REPORTING QUALIFIERS

Client: CL Environmental

Lab Section	Qualifier	Description
General Chemistry		
	F	Duplicate RPD exceeds the control limit

FDEP Facility No.	Sampling CompQAP No			FLORIDA 33081-4407					はんど Sample Condition as Received	PERFORMED C Sealed Yes No	Lot Number of Sampling Containers Used							,		or applicable fees)			σ/Γ/D		EAS ARE FOR LAB USE ONLY
7-592ig		Pink - Sampler Copy		07, HOLLYWOOD	Site Location:			\$	YSIS REQUIRED	IE OR METHOD NUMBER OF ED IN LARGE BOXES BELOW. APLE ITEMS NEED EACH TEST	Lead) Zinc Marina				>					Yes No (See price guide	Other (specify)	DUE DATE REQUESTED Confirmation #	Coating Code:	Misc. Charges	SHADED AF
TICAL GROUP L(0) 2-770.900 (modified form))	Hollywood, Florida 3302 • Cellular: 954-494-3272		t To Address:	Address: P.O. BOX 8144				ler's Signature	ANAI	PLACE NAM TESTS NEED (/) CHECK OFF WHICH SAM	TPH Thiocognite	Har muster))			ر ۲		QA/QC Report Needed?:	Report Format: Standard	Date:	Time:	Date: 23/11	Time! 10227
ERNATIONAL ANALY SUSTODY RECORD (DEP 6	00D BOULEVARD, SUITE 301, 4-894-4023 • FAX: 954-894-4501	Yellow - Lab Copy	Repo	AG) Billing		6 371 2267 FAX	FAX:	Samp	X SAMPLE LÓCATION/ # JOB DESCRIPTION	C (optional if needed N when samples are from T	different site locations) A – – – N R R S S S S S S S S S S S S S S S S S							γ		Total # of Containers:	La. Co. 20	inquished by Signature:	.hu	seived by Signature:	ny: V
CHAIN OF C	5555 HOLLYW PHONE: 95₄	n w/ Report		TICAL GROUP (I		CU Phone:87	Phone:		T MATRI	ED Z O SED SW SED Z SW SED Z SW	°₩¥888	ZZ		22			S C	<u>ې</u> لې	al Cite	NC 7 4 m	12 Cilana	ate: 1 of 1/1 (2) Reli	med: Compa	ate: (2) Rec	me: Compa
		Original - Retur		NATIONAL ANALY	Hus am	ton Carrob		TTHEN CRE		DATE COLLECTED COLLECTED		7/25/11/01:45	5:11,1-1	x 12: 12:	r 10:00	~ ~ ~	ch :21 ~	v 9:30	5 01:30 V	Durki / Je	1/envi		F		μ
mission Code:	ers: 		:port To:		oject Number/Name:	oject Contact:	ernate Contact:	ampled By (print): MM		SAMPLE ID		1771	173	155	1,00	F) - C	A 10	15	AT I'	cial Comments:		Relinquished by Signature:	npany: C C	Received by Signature:	npany:

s

Page 2 of 2	Sampling CompQAP No	nk - Sampler Copy		OLLYWOOD, FLORIDA 33081-4407	-ocation:				EQUIRED バリイビ Sample Condition	THOD NUMBER OF IGE BOXES BELOW. IS NEED EACH TEST PERFORMED Sealed Yes No	Lot Number of Sampling Containers Used						 (See price guide for applicable fees) 	Other (specify)	Ξ DATE REQUESTED: //irmation #	thing Code: 0.1, L /- D	3. Charges	
TICAL GROUP しのしう	, HOLLYWOOD, FLORIDA 33021 1 • CELLULAR: 954-494-3272	Eir	ort To Address:	ng Address: P.O. BOX 814407, HC	Site L			pler's Signature M	ANALYSIS RI	PLACE NAME OR METI TESTS NEEDED IN LAR (/) CHECK OFF WHICH SAMPLE ITEMS	Leard Cadmiun Arsenic, Meany, Cyanide ToH)))))))))			QA/QC Report Needed?: Yes No	Report Format: Standard	Date: DUE Con	Time:	$\int \frac{\text{Date:} \left[\gamma g \right] / l}{\gamma \left[\gamma g \right] / l}$ Miss	
INTERNATIONAL ANALY N OF CUSTODY RECORD (DEP	OLLYWOOD BOULEVARD, SUITE 301 NE: 954-894-4023 • FAX: 954-894-450	Yellow - Lab Cop	Rep			ne: 876 371 2267 FA	ne: FAX	San	MATRIX SAMPLE LOCATION/ # JOB DESCRIPTION	DW SED when samples are from T	S different site locations) A HW HW SA SIO SA	- S	S	u v			Total # of Containers:	مداري. خاب	(2) Relinquished by Signature:	Company:	(2) Received by Signature.	
CHAI	5555 H	Original - Return w/ Report		NAL ANALYTICAL GRO	try an	n Campbell Phot	Pho	athen Lee	о н ш	D N N N N N N N N N N N N N N N N N N N		11 01: 30cm	vic)	20,11			1 results to clour	(cinfem	Date; 125/1	Time:/	Date:	
sion Code:		6.0113	t To:	INTERNATIO	t Number/Name:	t Contact: $Cort_{u}$	ate Contact:	ed By (print): $N/.$		DATE SAMPLE ID COLLECTEI		1221-125K	ATS OF 11	VL STA VL STA			Comments:		nquished by Signature: MM	x C.L.S	eived by Signature:	

Client: CL Environmental

Login Number: 58219 List Number: 1

Creator: Hor, Koma

Job Number: 400-58219-2

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	True	18.6°C, 17.4°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-58168-1 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-58168-1 Job Description: AusJam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elwared

Approved for release. Marty Edwards Senior Project Manager 7/29/2011 3:46 PM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 07/29/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc.TestAmerica Pensacola3355 McLemore Drive, Pensacola, FL 32514Tel (850) 474-1001Fax (850) 478-2671www.testamericainc.com



EXECUTIVE SUMMARY - Detections

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method	
400-58168-3	AJ S 2						
Percent Moisture		14		0.10	%	Moisture	

METHOD SUMMARY

Client: CL Environmental

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Cyanide Cyanide, Distillation	TAL PEN	SW846 9014	SW846 9010B
Percent Moisture	TAL PEN	EPA Moisture	
Matrix Water			
Cyanide Distillation, Cyanide	TAL PEN	EPA 335.2	Distill/CN
Lab References:			

TAL PEN = TestAmerica Pensacola

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Method	Analyst	Analyst ID
EPA 335.2	Brooks, Barbara	ВВ
SW846 9014	Brooks, Barbara	ВВ
EPA Moisture	Hor, Koma	КН

Client: CL Environmental

			Date/Time	Date/Time	
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received	
400-58168-1	AJ 11	Water	07/26/2011 0000	07/27/2011 0955	
400-58168-2	AJ 12	Water	07/26/2011 0000	07/27/2011 0955	
400-58168-3	AJ S 2	Solid	07/26/2011 0000	07/27/2011 0955	

SAMPLE RESULTS

Analytical Data

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJ 11						
Lab Sample ID:	400-58168-1					Date Sampled	1: 07/26/2011 0000
Client Matrix:	Water					Date Receive	d: 07/27/2011 0955
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Total		ND		mg/L	0.0050	1.0	335.2
	Analysis Batch: 400-13	6302	Analysis Date:	07/29/2011 1403			
	Prep Batch: 400-13618	5	Prep Date: 07/2	28/2011 1345			

Analytical Data

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJ 12						
Lab Sample ID:	400-58168-2				I	Date Sampled	d: 07/26/2011 0000
Client Matrix:	Water				I	Date Receive	d: 07/27/2011 0955
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Total		ND		mg/L	0.0050	1.0	335.2
	Analysis Batch: 400-1	36302	Analysis Date:	07/29/2011 1408			
	Prep Batch: 400-1361	185	Prep Date: 07/2	28/2011 1345			

Analytical Data

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJ S 2						
Lab Sample ID:	400-58168-3		C	Date Sample	d: 07/26/2011 0000		
Client Matrix:	Solid	% Moisture: 14.4	C	Date Receive	ed: 07/27/2011 0955		
Analyte	Result	Qual Units	RL	Dil	Method		
Cyanide, Total	ND	mg/Kg	0.29	1.0	9014		
	Analysis Batch: 400-136304	Analysis Date: 07/29/2011 1403			DryWt Corrected: Y		
	Prep Batch: 400-136230	Prep Date: 07/29/2011 0855					
Percent Moisture	14 Analysis Batch: 400-136225	% Analysis Date: 07/28/2011 1700	0.10	1.0	Moisture DryWt Corrected: N		

QUALITY CONTROL RESULTS

Client: CL Environmental

Job Number: 400-58168-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 400-136185					
LCS 400-136185/2-A	Lab Control Sample	Т	Water	Distill/CN	
MB 400-136185/1-A	Method Blank	Т	Water	Distill/CN	
400-58168-1	AJ 11	Т	Water	Distill/CN	
400-58168-1MS	Matrix Spike	Т	Water	Distill/CN	
400-58168-1MSD	Matrix Spike Duplicate	Т	Water	Distill/CN	
400-58168-2	AJ 12	Т	Water	Distill/CN	
Analysis Batch:400-13622	25				
400-58168-3	AJ S 2	Т	Solid	Moisture	
Prep Batch: 400-136230					
LCS 400-136230/2-A	Lab Control Sample	Т	Solid	9010B	
MB 400-136230/1-A	Method Blank	Т	Solid	9010B	
400-58168-3	AJ S 2	Т	Solid	9010B	
400-58168-3MS	Matrix Spike	Т	Solid	9010B	
400-58168-3MSD	Matrix Spike Duplicate	Т	Solid	9010B	
Analysis Batch:400-13630	02				
LCS 400-136185/2-A	Lab Control Sample	Т	Water	335.2	400-136185
MB 400-136185/1-A	Method Blank	Т	Water	335.2	400-136185
400-58168-1	AJ 11	Т	Water	335.2	400-136185
400-58168-1MS	Matrix Spike	Т	Water	335.2	400-136185
400-58168-1MSD	Matrix Spike Duplicate	Т	Water	335.2	400-136185
400-58168-2	AJ 12	Т	Water	335.2	400-136185
Analysis Batch:400-13630	04				
LCS 400-136230/2-A	Lab Control Sample	Т	Solid	9014	400-136230
MB 400-136230/1-A	Method Blank	Т	Solid	9014	400-136230
400-58168-3	AJ S 2	Т	Solid	9014	400-136230
400-58168-3MS	Matrix Spike	Т	Solid	9014	400-136230
400-58168-3MSD	Matrix Spike Duplicate	Т	Solid	9014	400-136230

Report Basis

T = Total

TestAmerica Pensacola

Quality Control Results

Method: 335.2

Job Number: 400-58168-1

Client: CL Environmental

Method Blank - Batch: 400-136185

				Preparation: Di	still/CN	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136185/1-A Water 1.0 07/29/2011 1502 07/28/2011 1345 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136302 400-136185 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	KONELAB N/A ume: 50 mL ume: 50 mL	
Analyte		Resu	t	Qual	RL	-
Cyanide, Total		ND			0.0	0050
Lab Control Samp	le - Batch: 400-136185			Method: 335.2 Preparation: Di	still/CN	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136185/2-A Water 1.0 07/29/2011 1403 07/28/2011 1345 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136302 400-136185 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	KONELAB N/A ume: 50 mL ime: 50 mL	
Analyte		Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total		0.346	0.344	99	85 - 115	
Matrix Spike/ Matrix Spike Dupli	icate Recovery Report -	Batch: 400-136185		Method: 335.2 Preparation: Di	still/CN	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58168-1 Water 1.0 07/29/2011 1403 07/28/2011 1345 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136302 400-136185 N/A	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	KONELAB N/A ume: 50 mL ime: 50 mL	
MSD Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58168-1 Water 1.0 07/29/2011 1408 07/28/2011 1345 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136302 400-136185 N/A	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	KONELAB N/A ume: 50 mL ime: 50 mL	
Analyte		<u>% Rec.</u> MS MSD	Limit	RPD RPD I	Limit MS Qual	MSD Qual
Cyanide, Total		92 95	68 - 133	3 36		

Quality Control Results

Job Number: 400-58168-1

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136185

Method: 335.2 Preparation: Distill/CN

MS Lab Sample ID:	400-58168-1	Units: mg/L		MSD Lab Sam	ple ID:	400-58168-1
Client Matrix:	Water			Client Matrix:		Water
Dilution:	1.0			Dilution:		1.0
Analysis Date:	07/29/2011 1403			Analysis Date:		07/29/2011 1408
Prep Date:	07/28/2011 1345			Prep Date:		07/28/2011 1345
Leach Date:	N/A			Leach Date:		N/A
	S	Sample	MS Spike	MSD Spike	MS	MSD

	Sample	MS Spike	MSD Spike	MS	MSD
Analyte	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Cyanide, Total	ND	0.200	0.200	0.184	0.189

TestAmerica Pensacola

Quality Control Results

Job Number: 400-58168-1

Client: CL Environmental

Method Blank - B	atch: 400-136230			Method: 9014 Preparation: 9010B	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136230/1-A Solid 1.0 07/29/2011 1403 07/29/2011 0855 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136304 400-136230 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
Analyte		Resu	lt	Qual	RL
Cyanide, Total		ND			0.25
Lab Control Sam	ole - Batch: 400-136230			Method: 9014 Preparation: 9010B	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136230/2-A Solid 1.0 07/29/2011 1403 07/29/2011 0855 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136304 400-136230 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
Analyte		Spike Amount	Result	% Rec. Limi	t Qual
Cyanide, Total Matrix Spike/ Matrix Spike Dup	licate Recovery Report - B	17.3 Batch: 400-136230	17.8	103 85 Method: 9014 Preparation: 9010B	- 115
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58168-3 Solid 1.0 07/29/2011 1403 07/29/2011 0855 N/A	Analysis Batch: Prep Batch: Leach Batch:	: 400-136304 400-136230 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	0: 400-58168-3 Solid 1.0 07/29/2011 1403 07/29/2011 0855 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136304 400-136230 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	KONELAB N/A 1 g 50 mL
Analyte		<u>% Rec.</u> MS MSD	Limit	RPD RPD Limit	MS Qual MSD Qual
Cyanide, Total		101 96	57 - 136	5 20	

Quality Control Results

11.2

Job Number: 400-58168-1

Client: CL Environmental

Matrix Spike/

Cyanide, Total

Matrix Spike Duplicate Recovery Report - Batch: 400-136230

Method: 9014 Preparation: 9010B

11.8

MS Lab Sample ID:	400-58168-3	Units: m	ng/Kg	1	MSD Lab Sam	ple ID:	400-58168	8-3
Client Matrix:	Solid			(Client Matrix:		Solid	
Dilution:	1.0			I	Dilution:		1.0	
Analysis Date:	07/29/2011 1403				Analysis Date:		07/29/201	1 1403
Prep Date:	07/29/2011 0855			1	Prep Date:		07/29/201	1 0855
Leach Date:	N/A			I	Leach Date:		N/A	
		Sample	MS S	Spike M	SD Spike	MS		MSD
Analyte		Result/Qual	Amou	unt Ar	mount	Result/Qu	al	Result/Qual

11.7

11.7

ND

DATA REPORTING QUALIFIERS

Lab Section

Qualifier

Description

Submission Code:	G	INTERNATIONAL AN	ALYTICAL GROUP 1, 00 EP 62-770.900 (modified form))	-58168 FDEP	Facility No.
Orders:	5555 5555	HOLLYWOOD BOULEVARD, SUITE HONE: 954-894-4023 • FAX: 954-894	301, HOLLYWOOD, FLORIDA 33021 4501 • CELLULAR: 954-494-3272	Sampl	ling CompQAP Noval Date:val
	Original - Return w/ Report	Yellow - Lab	Copy	Pink - Sampler Copy	
Report To: C. L. Fuvirone	147 C 14		Report To Address:		
BII To: INTERNATION	VAL ANALYTICAL GR	OUP (IAG)	Billing Address: P.O. BOX 81440	7, HOLLYWOOD, FLC	DRIDA 33081-4407
Project Number/Name: HULS	an		-	Site Location: AUU (an gold Mine
Project Contact: Calta Co		10016: 876-371-2267	FAX:		
Alternate Contact: Ma HTL		mone: 876-439-9534	FAX:		
Sampled By (print): Mar Hu	الحق	/	Sampler's Signature		
	н ш	MATRIX SAMPLE LOCATION/ JOB DESCRIPTION	*	sis required	Sample Condition
T E SAMPLE ID COLLECTED	COLLECTED M	DW SW GW (optional if needed SED when samples are from	C PLACE NAME - 0 TESTS NEEDED N (//) CHECK OFF WHICH SAMPI	DR METHOD NUMBER OF I IN LARGE BOXES BELOW. LE ITEMS NEED EACH TEST PERFOF	MED Sealed Yes No
_≥ Page 17		EFF different site locations) EPF BIO BIO SA	TPH, Copper Councile Lead Britiscyance Zinc	Leevel Mercury Arsenic TPH. Cyanide TPH.	Lot Number of Sampling Containers Used
19 AJ11 26/7/1		SW	L / / h		
T C L		MS	ر ۲		
* AJS 2 ~		S		7 7	
4 ເ					
10					
Special Comments: Charl really	3th clenvir Oc	Jouralice Total # of Containers:	QA/QC Report Needed?: Y	es No (See price guide for applic	cable fees)
)	5. Cor	Report Format: Standard	Other (specify)	
(1) Relinquished by Signature: MM	Late: 7/11	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED: Confirmation #	
Company: C.L.Euviron	Time:	Company:	Time:	Coating Code:	
(1) Received by Signature:	Date:	(2) Received by Signature:	Date / 1/1	Misc. Charges	
Company:	Time:	Company:	Timegras	SHADED AREAS AF	RE FOR LAB USE ONLY

•

Client: CL Environmental

Login Number: 58168 List Number: 1

Creator: Hor, Koma

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-58168-1

List Source: TestAmerica Pensacola



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-58168-2 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-58168-2 Job Description: AusJam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elvered

Approved for release. Marty Edwards Senior Project Manager 8/11/2011 9:20 AM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 08/11/2011 Revision: 1

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc. TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514 Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com



Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC Semi VOA

Method FL-PRO: Due to the high concentration of TRPH (C8-C40), the matrix spike / matrix spike duplicate (MS/MSD) for batch 400-136242 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

Metals

Method 7470A: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for batch 400-136375 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method 7471A: The matrix spike (MS) recovery for batch 400-136240 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Organic Prep

Method 3520C: Insufficient sample volume was provided to meet method-mandated requirements for matrix spike/matrix spike duplicate (MS/MSD) analyses for batch 400-136046 Method FL_PRO.

No other analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: CL Environmental

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method	
400-58168-1	AJ 11						
Thiocyanate		0.20		0.10	mg/L	SM 4500 CN M	
400-58168-2	AJ 12						
Thiocyanate		0.21		0.10	mg/L	SM 4500 CN M	
400-58168-3	AJ S 2						
Arsenic		4.7		0.58	mg/Kg	6010B	
Lead		8.2		0.58	mg/Kg	6010B	
Mercury		0.17		0.015	mg/Kg	7471A	

METHOD SUMMARY

Client: CL Environmental

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Florida - Petroleum Range Organics (GC) Ultrasonic Extraction	TAL PEN	FL-DEP FL-PRO	SW846 3550B
Metals (ICP) Preparation, Metals	TAL PEN	SW846 6010B	SW846 3050B
Mercury Preparation, Mercury Matrix Water	TAL PEN	SW846 7471A	SW846 7471A
Florida - Petroleum Range Organics (GC) Liquid-Liquid Extraction (Continuous)	TAL PEN	FL-DEP FL-PRO	SW846 3520C
Metals (ICP) Preparation, Total Metals	TAL PEN	SW846 6010B	SW846 3010A
Mercury Preparation, Mercury	TAL PEN	SW846 7470A	SW846 7470A
Thiocyanate	TAL MOB	SM SM 4500 CN	Μ

Lab References:

TAL MOB = TestAmerica Mobile

TAL PEN = TestAmerica Pensacola

Method References:

FL-DEP = State Of Florida Department Of Environmental Protection, Florida Administrative Code.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: CL Environmental

Method	Analyst	Analyst ID
FL-DEP FL-PRO	Ayers, Kim	KA
FL-DEP FL-PRO	Waite, Daniel	DW
SW846 6010B	St. Pere, Gary	GS
SW846 7470A	Cortez, Maria	MC
SW846 7471A	Cortez, Maria	MC
SM SM 4500 CN M	Norvang, Vanyda A	VAN

Client: CL Environmental

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
400-58168-1	AJ 11	Water	07/26/2011 0000	07/27/2011 0955
400-58168-2	AJ 12	Water	07/26/2011 0000	07/27/2011 0955
400-58168-3	AJ S 2	Solid	07/26/2011 0000	07/27/2011 0955
SAMPLE RESULTS

Client: CL Environmental

Client Sample ID:	AJ 11					
Lab Sample ID: Client Matrix:	400-58168-1 Water				Date Date	Sampled: 07/26/2011 0000 Received: 07/27/2011 0955
		FL-PRO Florida - Petro	leum Range O	rganics (GC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 07/28/2011 1747 07/27/2011 1452	Analysis Batch: Prep Batch:	400-136198 400-136046		Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58168-C-1-A_01 1080 mL 1.8 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.13
Surrogate		%Rec		Qualifier	Accepta	nce Limits
n-C39		60			20 - 176	
o-Terphenyl		74			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ 12					
Lab Sample ID: Client Matrix:	400-58168-2 Water				Date Date	Sampled: 07/26/2011 0000 Received: 07/27/2011 0955
		FL-PRO Florida - Petro	leum Range O	rganics (G	SC)	
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	FL-PRO 3520C 1.0 07/28/2011 1757 07/27/2011 1452	Analysis Batch: Prep Batch:	400-136198 400-136046	lr L Ir Ir	nstrument ID: .ab File ID: nitial Weight/Volume: ïinal Weight/Volume: njection Volume:	WALLE 400-58168-C-2-A_01 1080 mL 1.6 mL 1 uL
Analyte		Result (m	ıg/L)	Qualifier		RL
C8-C40		ND				0.11
Surrogate		%Rec		Qualifier	Acceptar	nce Limits
n-C39		71			20 - 176	
o-Terphenyl		74			49 - 143	

Client: CL Environmental

Client Sample ID:	AJ S 2					
Lab Sample ID:	400-58168-3				Date	Sampled: 07/26/2011 0000
Client Matrix:	Solid	% Moisture	e: 14.4		Date	Received: 07/27/2011 0955
	FL	-PRO Florida - Petro	oleum Range C	Organics (GC)		
Analysis Method:	FL-PRO	Analysis Batch:	400-136311	Instrument	D:	WALLE
Prep Method:	3550B	Prep Batch:	400-136242	Lab File ID:		400-58168-a-3-e_065
Dilution:	1.0			Initial Weigh	nt/Volume:	30.49 g
Analysis Date:	07/30/2011 0322			Final Weigh	t/Volume:	1.4 mL
Prep Date:	07/29/2011 0912			Injection Vo	lume:	1 uL
Analyte	DryWt Corrected: Y	/ Result (m	ıg/Kg)	Qualifier		RL
C8-C40		ND				8.0
Surrogate		%Rec		Qualifier	Acceptan	ce Limits
n-C39		61			37 - 138	
o-Terphenyl		63			50 - 121	

Client: CL Environmental

Client Sample ID:	AJ 11					
Lab Sample ID: Client Matrix:	400-58168-1 Water				Date Sampled: 07/26/2011 000 Date Received: 07/27/2011 099)0 55
		6010B	Metals (ICP)			-
Analysis Method:	6010B	Analysis Batch:	400-136413	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136154	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volur	ne: 50 mL	
Analysis Date:	08/01/2011 1527			Final Weight/Volun	ne: 50 mL	
Prep Date:	07/28/2011 0944					
Analyte		Result (m	ng/L)	Qualifier	RL	
Arsenic		ND			0.0050	_
Cadmium		ND			0.0050	
Copper		ND			0.010	
Lead		ND			0.0050	
Zinc		ND			0.020	
		7470	A Mercury			-
Analysis Method:	7470A	Analysis Batch:	400-136397	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136375	Lab File ID:	HW136370.PRN	
Dilution:	1.0			Initial Weight/Volur	ne: 40 mL	
Analysis Date:	08/01/2011 1454			Final Weight/Volun	ne: 40 mL	
Prep Date:	08/01/2011 0845			-		
Analyte		Result (m	ng/L)	Qualifier	RL	
Mercury		ND			0.00020	

Client: CL Environmental

Client Sample ID:	AJ 12					
Lab Sample ID: Client Matrix:	400-58168-2 Water] 	Date Sampled: 07/26/2011 00 Date Received: 07/27/2011 09)00 955
		6010B	Metals (ICP)			
Analysis Method:	6010B	Analysis Batch:	400-136413	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-136154	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volum	ne: 50 mL	
Analysis Date:	08/01/2011 1531			Final Weight/Volum	ie: 50 mL	
Prep Date:	07/28/2011 0944					
Analyte		Result (m	ng/L)	Qualifier	RL	
Arsenic		ND			0.0050	
Cadmium		ND			0.0050	
Copper		ND			0.010	
Lead		ND			0.0050	
Zinc		ND			0.020	
		7470	A Mercury			
Analysis Method:	7470A	Analysis Batch:	400-136397	Instrument ID:	HYDRA AA	
Prep Method:	7470A	Prep Batch:	400-136375	Lab File ID:	HW136370.PRN	
Dilution:	1.0			Initial Weight/Volum	ne: 40 mL	
Analysis Date:	08/01/2011 1456			Final Weight/Volum	ie: 40 mL	
Prep Date:	08/01/2011 0845			-		
Analyte		Result (m	ng/L)	Qualifier	RL	
Mercury		ND			0.00020	

Client: CL Environmental

Client Sample ID:	AJ S 2						
Lab Sample ID: Client Matrix:	400-58168-3 Solid	% Moisture	: 14.4			Date Sam Date Rece	pled: 07/26/2011 0000 eived: 07/27/2011 0955
		6010B N	Aetals (ICP)				
Analysis Method: Prep Method: Dilution: Analysis Date:	6010B 3050B 1.0 07/29/2011 1926	Analysis Batch: Prep Batch:	400-136360 400-136190		Instrument ID: Lab File ID: Initial Weight/Volum Final Weight/Volum	65 N/ ne: .50 ne: 50	00 ICP Duo A 02 g 0 mL
Prep Date: Analyte	07/28/2011 1613 DryWt Corrected: Y	Result (m	g/Kg)	Qualifie	r		RL
Arsenic Cadmium Lead		4.7 ND 8.2					0.58 0.58 0.58
		7471 <i>A</i>	Mercury				
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	7471A 7471A 1.0 07/29/2011 1603 07/29/2011 0900	Analysis Batch: Prep Batch:	400-136312 400-136240		Instrument ID: Lab File ID: Initial Weight/Volun Final Weight/Volun	H) HS ne: .64 ne: 40	YDRA AA S136240B.PRN 407 g) mL
Analyte	DryWt Corrected: Y	Result (m	g/Kg)	Qualifie	r		RL
Mercury		0.17					0.015

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJ 11						
Lab Sample ID:	400-58168-1				Date	e Sample	d: 07/26/2011 0000
Client Matrix:	Water				Date	Receive	ed: 07/27/2011 0955
Analyte		Result	Qual	Units	RL	Dil	Method
Thiocyanate		0.20		mg/L	0.10	1.0	SM 4500 CN M
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1402			

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJ 12						
Lab Sample ID:	400-58168-2				Date	Sample	d: 07/26/2011 0000
Client Matrix:	Water				Date	Receive	ed: 07/27/2011 0955
Analyte		Result	Qual	Units	RL	Dil	Method
Thiocyanate		0.21		mg/L	0.10	1.0	SM 4500 CN M
	Analysis Batch: 700-	104116	Analysis Date:	08/04/2011 1402			

QUALITY CONTROL RESULTS

Job Number: 400-58168-2

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 400-136046					
LCS 400-136046/4-A	Lab Control Sample	Т	Water	3520C	
MB 400-136046/5-A	Method Blank	Т	Water	3520C	
400-58168-1	AJ 11	Т	Water	3520C	
400-58168-2	AJ 12	Т	Water	3520C	
Analysis Batch:400-13619	18				
LCS 400-136046/4-A	Lab Control Sample	Т	Water	FL-PRO	400-136046
MB 400-136046/5-A	Method Blank	Т	Water	FL-PRO	400-136046
400-58168-1	AJ 11	Т	Water	FL-PRO	400-136046
400-58168-2	AJ 12	Т	Water	FL-PRO	400-136046
Prep Batch: 400-136242					
LCS 400-136242/9-A	Lab Control Sample	Т	Solid	3550B	
MB 400-136242/10-A	Method Blank	Т	Solid	3550B	
400-58168-3	AJ S 2	Т	Solid	3550B	
400-58211-D-1-B MS	Matrix Spike	Т	Solid	3550B	
400-58211-D-1-C MSD	Matrix Spike Duplicate	Т	Solid	3550B	
Analysis Batch:400-13631	1				
LCS 400-136242/9-A	Lab Control Sample	Т	Solid	FL-PRO	400-136242
MB 400-136242/10-A	Method Blank	Т	Solid	FL-PRO	400-136242
400-58168-3	AJ S 2	Т	Solid	FL-PRO	400-136242
400-58211-D-1-B MS	Matrix Spike	Т	Solid	FL-PRO	400-136242
400-58211-D-1-C MSD	Matrix Spike Duplicate	Т	Solid	FL-PRO	400-136242

Report Basis

T = Total

Job Number: 400-58168-2

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 400-136154					
LCS 400-136154/21-A	Lab Control Sample	Т	Water	3010A	
MB 400-136154/20-A	Method Blank	Т	Water	3010A	
400-58168-1	AJ 11	Т	Water	3010A	
400-58168-2	AJ 12	Т	Water	3010A	
400-58178-H-1-B MS	Matrix Spike	Т	Water	3010A	
400-58178-H-1-C MSD	Matrix Spike Duplicate	Т	Water	3010A	
Prep Batch: 400-136190					
LCS 400-136190/24-A	Lab Control Sample	Т	Solid	3050B	
MB 400-136190/23-A	Method Blank	Т	Solid	3050B	
400-58029-B-12-B MS	Matrix Spike	т	Solid	3050B	
400-58029-B-12-C MSD	Matrix Spike Duplicate	Т	Solid	3050B	
400-58168-3	AJ S 2	Т	Solid	3050B	
Prep Batch: 400-136240					
LCS 400-136240/15-A ^10	Lab Control Sample	Т	Solid	7471A	
MB 400-136240/14-A	Method Blank	Т	Solid	7471A	
400-58029-B-12-F MS	Matrix Spike	Т	Solid	7471A	
400-58029-B-12-G MSD	Matrix Spike Duplicate	Т	Solid	7471A	
400-58168-3	AJ S 2	Т	Solid	7471A	
Analysis Batch:400-136312	2				
LCS 400-136240/15-A ^10	Lab Control Sample	Т	Solid	7471A	400-136240
MB 400-136240/14-A	Method Blank	Т	Solid	7471A	400-136240
400-58029-B-12-F MS	Matrix Spike	Т	Solid	7471A	400-136240
400-58029-B-12-G MSD	Matrix Spike Duplicate	Т	Solid	7471A	400-136240
400-58168-3	AJ S 2	Т	Solid	7471A	400-136240
Analysis Batch:400-136360	D				
LCS 400-136190/24-A	Lab Control Sample	Т	Solid	6010B	400-136190
MB 400-136190/23-A	Method Blank	Т	Solid	6010B	400-136190
400-58029-B-12-B MS	Matrix Spike	Т	Solid	6010B	400-136190
400-58029-B-12-C MSD	Matrix Spike Duplicate	Т	Solid	6010B	400-136190
400-58168-3	AJ S 2	Т	Solid	6010B	400-136190
Prep Batch: 400-136375					
LCS 400-136375/15-A	Lab Control Sample	Т	Water	7470A	
MB 400-136375/14-A	Method Blank	Т	Water	7470A	
400-58168-1	AJ 11	Т	Water	7470A	
400-58168-2	AJ 12	Т	Water	7470A	
400-58181-A-4-B MS	Matrix Spike	Т	Water	7470A	
400-58181-A-4-C MSD	Matrix Spike Duplicate	Т	Water	7470A	

Job Number: 400-58168-2

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:400-13639	97				
LCS 400-136375/15-A	Lab Control Sample	Т	Water	7470A	400-136375
MB 400-136375/14-A	Method Blank	Т	Water	7470A	400-136375
400-58168-1	AJ 11	Т	Water	7470A	400-136375
400-58168-2	AJ 12	Т	Water	7470A	400-136375
400-58181-A-4-B MS	Matrix Spike	Т	Water	7470A	400-136375
400-58181-A-4-C MSD	Matrix Spike Duplicate	Т	Water	7470A	400-136375
Analysis Batch:400-13641	13				
LCS 400-136154/21-A	Lab Control Sample	Т	Water	6010B	400-136154
MB 400-136154/20-A	Method Blank	Т	Water	6010B	400-136154
400-58168-1	AJ 11	Т	Water	6010B	400-136154
400-58168-2	AJ 12	Т	Water	6010B	400-136154
400-58178-H-1-B MS	Matrix Spike	Т	Water	6010B	400-136154
400-58178-H-1-C MSD	Matrix Spike Duplicate	Т	Water	6010B	400-136154
Demont Denie					
<u>керогт Basis</u> T = Total					

General Chemistry

Analysis Batch:700-104116				
LCS 700-104116/4	Lab Control Sample	Т	Water	SM 4500 CN M
LCSD 700-104116/5	Lab Control Sample Duplicate	Т	Water	SM 4500 CN M
400-58168-1	AJ 11	Т	Water	SM 4500 CN M
400-58168-2	AJ 12	Т	Water	SM 4500 CN M
700-60198-A-2 MS	Matrix Spike	Т	Water	SM 4500 CN M
700-60198-A-2 MSD	Matrix Spike Duplicate	Т	Water	SM 4500 CN M

Report Basis

T = Total

TestAmerica Pensacola

Job Number: 400-58168-2

Method: FL-PRO Preparation: 3520C

Client: CL Environmental

Method Blank - Batch: 400-136046

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136046/5-A Water 1.0 07/28/2011 1658 07/27/2011 0851 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136198 400-136046 N/A mg/L	6198 Instrument ID: 6046 Lab File ID: Initial Weight/Volum Final Weight/Volum Injection Volume:		WALLE MB 1000 mL 2.4 mL 1 uL	
Analyte		Res	ult	Qual RL			
C8-C40		ND		0.18			
Surrogate		%	Rec	Acceptance Limits			
n-C39		7	79 20 - 176				
o-Terphenyl		89 49 - 143					
Lab Control Sar	nple - Batch: 400-136046			Method: FL Preparatio	-PRO 1: 3520C		
Lab Sample ID:	LCS 400-136046/4-A	Analysis Batch:	400-136198	Instrument II):	WALLE	
Client Matrix:	Water	Prep Batch:	400-136046	Lab File ID:		LCS	
Dilution:	1.0	Leach Batch:	N/A	Initial Weight	/Volume:	1000 mL	
Analysis Date:	07/28/2011 1708	Units:	mg/L	Final Weight	/Volume:	2.4 mL	
Prep Date:	07/27/2011 0851			Injection Vol	ume:	1 uL	
Leach Date:	N/A						
Analyte		Spike Amount	Result	% Rec.	Limit		Qual
C8-C40		3.40	3.00	88	41 -	133	
Surrogate		%	Rec	Ac	ceptance Li	mits	
n-C39		6	61		20 - 176		
o-Terphenyl		77 49 - 143					

TestAmerica Pensacola

Job Number: 400-58168-2

Client: CL Environmental

Method Blank - Batch: 400-136242

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136242/10-A Solid 1.0 07/30/2011 0243 07/29/2011 0912 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136311 400-136242 N/A mg/Kg	Instrument I Lab File ID: Initial Weigh Final Weigh Injection Vo	D: nt/Volume: t/Volume: lume:	WALLE mb 30.00 g 1.5 mL 1 uL	
Analyte		Res	ult	Qual		RL	
C8-C40		ND		7.5			
Surrogate		%	Rec	Acceptance Limits			
n-C39		6	33	37 - 138			
o-Terphenyl		76 50 - 121					
Lab Control San	nple - Batch: 400-136242			Method: F Preparatio	L-PRO n: 3550B		
Lab Sample ID:	LCS 400-136242/9-A	Analysis Batch:	400-136311	Instrument I	D:	WALLE	
Client Matrix:	Solid	Prep Batch:	400-136242	Lab File ID:		lcs	
Dilution:	1.0	Leach Batch:	N/A	Initial Weigh	nt/Volume:	30.00 g	
Analysis Date:	07/30/2011 0253	Units:	mg/Kg	Final Weigh	t/Volume:	1.7 mL	
Prep Date:	07/29/2011 0912			Injection Vo	lume:	1 uL	
Leach Date:	N/A						
Analyte		Spike Amount	Result	% Rec.	Limit		Qual
C8-C40		113	96.7	85	50 -	124	
Surrogate		%	Rec	A	cceptance Lir	nits	
n-C39		6	68		37 - 138		
o-Terphenyl		77 50 - 121					

Method: FL-PRO

Preparation: 3550B

Quality Control Results

Job Number: 400-58168-2

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136242

Method: FL-PRO Preparation: 3550B

MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58211-D-1-B MS Solid 20 07/30/2011 0303 07/29/2011 0912 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136311 400-136242 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume:	WALLE 400-58211-d-1-b 30.10 g 2.2 mL 1 uL
MSD Lab Sample ID	2 400-58211-D-1-C MSD	Analysis Batch:	400-136311	Instrument ID:	WALLE
Client Matrix:	Solid	Prep Batch:	400-136242	Lab File ID:	400-58211-d-1-c
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	30.09 g
Analysis Date:	07/30/2011 0313			Final Weight/Volume:	2.4 mL
Prep Date:	07/29/2011 0912			Injection Volume:	1 uL
Leach Date:	N/A				
		% Rec			

Analyte	MS	MSD	Limit		RPD	RPD Limit	MS Qual	MSD Qual
C8-C40	-959	-14	11 -	154	16	50	4	4
Surrogate		MS % Rec		MSD % F	lec	Acce	otance Limits	
n-C39		34	х	157	Х	37	' - 138	
o-Terphenyl		50		67		50) - 121	

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136242

Method: FL-PRO Preparation: 3550B

MS Lab Sample ID:	400-58211-D-1-B MS	Units: mg/Kg	MSD Lab Sample ID:	400-58211-D-1-C MSD
Client Matrix:	Solid		Client Matrix:	Solid
Dilution:	20		Dilution:	20
Analysis Date:	07/30/2011 0303		Analysis Date:	07/30/2011 0313
Prep Date:	07/29/2011 0912		Prep Date:	07/29/2011 0912
Leach Date:	N/A		Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qua	al	MSD Result/Qual	
C8-C40	7900	124	124	6720	4	7890	4

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Quality Control Results

Job Number: 400-58168-2

6500 ICP Duo

80 - 120

80 - 120

80 - 120 80 - 120

Method: 6010B Preparation: 3010A

Client: CL Environmental

Lab Sample ID:

Cadmium

Copper

Lead

Zinc

Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	Water 1.0 08/01/2011 1511 07/28/2011 0944 N/A	Prep Batch: Leach Batch: Units:	400-136154 N/A mg/L	Lab File ID: Initial Weight/Volume Final Weight/Volume:	N/A : 50 mL : 50 mL
Analyte		Res	sult	Qual	RL
Arsenic Cadmium Copper Lead Zinc		ND ND ND ND ND			0.0050 0.0050 0.010 0.0050 0.020
Lab Control Sam	nple - Batch: 400-136154			Method: 6010B Preparation: 3010 <i>/</i>	A
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136154/21-A Water 1.0 08/01/2011 1515 07/28/2011 0944 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136413 400-136154 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume Final Weight/Volume:	6500 ICP Duo N/A : 50 mL 50 mL
Analyte		Spike Amount	Result	% Rec. Lin	nit Qual

0.453

0.940

0.935

0.937

91

94

94

94

MB 400-136154/20-A Analysis Batch: 400-136413 Instrument ID: Prep Batch: 400-136154 Lab File ID: Water

Method Blank - Batch: 400-136154

0.500

1.00

1.00

1.00

Quality Control Results

Job Number: 400-58168-2

Matrix Spike/ Method: 6010B Matrix Spike Duplicate Recovery Report - Batch: 400-136154 Preparation: 3010A 6500 ICP Duo 400-136413 MS Lab Sample ID: 400-58178-H-1-B MS Analysis Batch: Instrument ID: Client Matrix: Water Prep Batch: 400-136154 Lab File ID: N/A 1.0 Dilution: Leach Batch: Initial Weight/Volume: 50 mL N/A 08/01/2011 1541 Analysis Date: Final Weight/Volume: 50 mL 07/28/2011 0944 Prep Date: Leach Date: N/A MSD Lab Sample ID: 6500 ICP Duo 400-58178-H-1-C MSD Analysis Batch: 400-136413 Instrument ID: Client Matrix: Water Prep Batch: 400-136154 Lab File ID: N/A Dilution: 1.0 Leach Batch: N/A Initial Weight/Volume: 50 mL 08/01/2011 1543 Analysis Date: Final Weight/Volume: 50 mL 07/28/2011 0944 Prep Date: Leach Date: N/A % Rec. RPD Analyte MS MSD Limit **RPD** Limit MS Qual MSD Qual 88 75 - 125 Arsenic 87 1 20 Cadmium 89 89 75 - 125 1 20 Copper 94 93 75 - 125 1 20 Lead 102 103 75 - 125 1 20 Zinc 89 90 75 - 125 1 20 Method: 6010B Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 400-136154 Preparation: 3010A 400-58178-H-1-C MSD MS Lab Sample ID: 400-58178-H-1-B MS MSD Lab Sample ID: Units: mg/L Client Matrix: Water Client Matrix: Water Dilution: Dilution: 1.0 1.0 08/01/2011 1541 08/01/2011 1543 Analysis Date: Analysis Date: 07/28/2011 0944 07/28/2011 0944 Prep Date: Prep Date: Leach Date: N/A Leach Date: N/A Sampla MS Spiko MOD Shika MC MOD

	Sample	INO OPIKE	MOD Opike	WI0	MOD
Analyte	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Arsenic	ND	1.00	1.00	0.873	0.880
Cadmium	ND	0.500	0.500	0.444	0.446
Copper	0.045	1.00	1.00	0.983	0.977
Lead	0.021	1.00	1.00	1.04	1.05
Zinc	0.062	1.00	1.00	0.957	0.963

Client: CL Environmental

TestAmerica Pensacola

Quality Control Results

Job Number: 400-58168-2

Client: CL Environmental

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136190/23-A Solid 1.0 07/29/2011 1756 07/28/2011 1613 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136360 400-136190 N/A mg/Kg	Instrument II Lab File ID: Initial Weigh Final Weight	D: t/Volume: /Volume:	6500 ICP Duo N/A .500 g 50 mL
Analyte		Res	ult	Qual		RL
Arsenic		ND				0.50
Cadmium		ND				0.50
Lead		ND				0.50
Lab Control Sar	nple - Batch: 400-136190			Method: 60 Preparatio)10B n: 3050B	
Lab Sample ID:	LCS 400-136190/24-A	Analysis Batch:	400-136360	Instrument II	D:	6500 ICP Duo
Client Matrix:	Solid	Prep Batch:	400-136190	Lab File ID:		N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weigh	t/Volume:	.505 g
Analysis Date:	07/29/2011 1759	Units:	mg/Kg	Final Weight	/Volume:	50 mL
Prep Date:	07/28/2011 1613		0 0	0		
Leach Date:	N/A					
Analyte		Spike Amount	Result	% Rec.	Limit	Qual
Arsenic		136	127	94	83 - 1	118
Cadmium		84.2	79.1	94	84 - 1	116
Lead		119	128	107	83 - 1	117

Method: 6010B Preparation: 3050B

Method Blank - Batch: 400-136190

Quality Control Results

Job Number: 400-58168-2

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 400-136190					Method: 6010B Preparation: 3050B			
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58029-B-12-B MS Solid 1.0 07/29/2011 1913 07/28/2011 1613 N/A	Anal Prep Leac	ysis Batch: Batch: h Batch:	400-136360 400-136190 N/A	Instrume Lab File I Initial We Final We	nt ID: ID: ight/Volume: ight/Volume:	6500 ICP N/A .550 g 50 mL	Duo
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	: 400-58029-B-12-C MSD Solid 1.0 07/29/2011 1916 07/28/2011 1613 N/A	Anal Prep Leac	ysis Batch: Batch: h Batch:	400-136360 400-136190 N/A	Instrume Lab File I Initial We Final We	nt ID: ID: eight/Volume: ight/Volume:	6500 ICP N/A .513 g 50 mL	Duo
Analyte		<u>%</u> MS	<u>Rec.</u> MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic Cadmium Lead		89 95 104	89 95 104	75 - 125 75 - 125 75 - 125	6 7 6	20 20 20		
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report - B	atch: 40	0-136190		Method: (Preparati	6010B on: 3050B		
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58029-B-12-B MS Solid 1.0 07/29/2011 1913 07/28/2011 1613 N/A	Un	its: mg/Kg		MSD Lab S Client Matr Dilution: Analysis D Prep Date: Leach Date	Sample ID: rix: ate: e:	400-58029-B- Solid 1.0 07/29/2011 1 07/28/2011 1 N/A	-12-C MSD 916 613
Analyte		Sample Result/0	Qual	MS Spike Amount	MSD Spike Amount	MS Result/Q	MS ual Res	D sult/Qual
Arsenic Cadmium Lead		1.6 ND 9.8		116 58.2 116	125 62.4 125	105 55.5 131	112 59. 139	2 3)

Client: CL Environmental

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Quality Control Results

Method: 7470A Preparation: 7470A

Job Number: 400-58168-2

Client: CL Environmental

Method Blank - Batch: 400-136375

Lab Sample ID:	MB 400-136375/14-A	Analysis Batch:	400-136397	Instrument	ID:	HYDRA AA	
Client Matrix:	Water	Prep Batch:	400-136375	Lab File ID	:	HW136370	.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weig	ht/Volume:	40 mL	
Analysis Date:	08/01/2011 1538	Units:	mg/L	Final Weigh	nt/Volume:	40 mL	
Prep Date:	08/01/2011 0845						
Leach Date:	N/A						
Analyte		Re	esult	Qual		RL	
Mercuny		NI)			0.0	າດວດ
Wercury		INL.)			0.00	5020
Lab Control Samp	ble - Batch: 400-136375			Method: 7 Preparatio	7470A on: 7470A		
Lab Sample ID:	LCS 400-136375/15-A	Analysis Batch:	400-136397	Instrument	ID:	HYDRA AA	
Client Matrix:	Water	Prep Batch:	400-136375	Lab File ID	:	HW136370	.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weig	ht/Volume:	40 mL	
Analysis Date:	08/01/2011 1340	Units:	mg/L	Final Weigh	nt/Volume:	40 mL	
Prep Date:	08/01/2011 0845		-	-			
Leach Date:	N/A						
Analyte		Spike Amount	Result	% Rec	l imit		Qual
Mercury		0.00100	0.00105	105	80 -	120	
		0.00100	0.00100	100		120	
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report - B	atch: 400-1363	75	Method: / Preparatio	/4/0A on: 7470A		
MS I ab Sample ID:	400-58181-4-4-B MS	Analysis Bat	ch: 400-136307	Instrument	חו.		
Client Matrix	Water	Prep Batch	400-136375	I ab File ID		HW136370	PRN
Dilution:	1.0	Leach Batch	· N/A	Initial Weig	ht/Volume:	40 ml	
Analysis Date:	08/01/2011 1502	200011 201011		Final Weigh	nt/Volume:	40 mL	
Prep Date:	08/01/2011 0845						
Leach Date:	N/A						
MSD Lab Sample ID	400-58181-A-4-C MSD	Analysis Bat	ch: 400-136397	Instrument	ID:	HYDRA AA	
Client Matrix:	Water	Prep Batch:	400-136375	Lab File ID	:	HW136370	PRN
Dilution:	1.0	Leach Batch	: N/A	Initial Weig	ht/Volume:	40 mL	
Analysis Date:	08/01/2011 1515			Final Weigh	nt/Volume:	40 mL	
Prep Date:	08/01/2011 0845						
Leach Date:	N/A						
		% P oo					
Analyte		MS MSE	D Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury		79 75	85 - 115	5	20	F	F
				-			

Quality Control Results

Client: CL Environmental

Job Number: 400-58168-2

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136375

Method: 7470A Preparation: 7470A

MS Lab Sample ID:	400-58181-A-4-B MS	Units:	mg/L	MSD Lab Sample ID:	400-58181-A-4-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	08/01/2011 1502			Analysis Date:	08/01/2011 1515
Prep Date:	08/01/2011 0845			Prep Date:	08/01/2011 0845
Leach Date:	N/A			Leach Date:	N/A

	Sample	MS Spike	MSD Spike	MS	MSD
Analyte	Result/Qual	Amount	Amount	Result/Qual	Result/Qual
Mercury	ND	0.00200	0.00200	0.00173 F	0.00165 F

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Quality Control Results

Method: 7471A

Job Number: 400-58168-2

Client: CL Environmental

Method Blank - Batch: 400-136240

				Preparation: 7471A	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-136240/14-A Solid 1.0 07/29/2011 1554 07/29/2011 0900 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136312 400-136240 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136240B.PRN .6000 g 40 mL
Analyte		Resu	lt	Qual	RL
Mercury		ND			0.013
Lab Control Samp	ble - Batch: 400-136240			Method: 7471A Preparation: 7471A	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-136240/15-A Solid 10 07/29/2011 1556 07/29/2011 0900 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-136312 400-136240 N/A mg/Kg	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136240B.PRN .2073 g 40 mL
Analyte		Spike Amount	Result	% Rec. Limi	t Qual
Mercury Matrix Spike/		7.42	8.28	112 80 Method: 7471A	- 120
Matrix Spike Dupl	icate Recovery Report - Ba	atch: 400-136240		Preparation: 7471A	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58029-B-12-F MS Solid 1.0 07/29/2011 1634 07/29/2011 0900 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136312 400-136240 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136240B.PRN .5691 g 40 mL
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	: 400-58029-B-12-G MSD Solid 1.0 07/29/2011 1635 07/29/2011 0900 N/A	Analysis Batch: Prep Batch: Leach Batch:	400-136312 400-136240 N/A	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	HYDRA AA HS136240B.PRN .5692 g 40 mL
Analyte		<u>% Rec.</u> MS MSD	Limit	RPD RPD Limit	MS Qual MSD Qual
Mercury		122 120	80 - 120	1 20	F

Quality Control Results

Client: CL Environmental

Job Number: 400-58168-2

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-136240

Method: 7471A Preparation: 7471A

MS Lab Sample ID:	400-58029-B-12-F MS	Units:	mg/Kg		MSD Lab Sam	ple ID:	400-58029-E	3-12-G MSD
Client Matrix:	Solid				Client Matrix:		Solid	
Dilution:	1.0				Dilution:		1.0	
Analysis Date:	07/29/2011 1634				Analysis Date:		07/29/2011	1635
Prep Date:	07/29/2011 0900				Prep Date:		07/29/2011	0900
Leach Date:	N/A				Leach Date:		N/A	
		Sample		MS Snike	MSD Snike	MS	M	SD

	Sample	MS Spike	MSD Spike	MS		MSD
Analyte	Result/Qual	Amount	Amount	Result/Qua	al	Result/Qual
Mercury	ND	0.180	0.180	0.219	F	0.216

Job Number: 400-58168-2

Client: CL Environmental

Method Reporting Limit Check - Batch: 700-104116

Method: SM 4500 CN M Preparation: N/A

Lab Sample ID: Client Matrix:	MRL 700-104116/3 Water	Analysis Batch: Prep Batch:	700-104116 N/A	Instrument ID: Lab File ID:	KONELAB DATA08.04.11A1SCN.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volu	ıme: 10 mL
Analysis Date:	08/04/2011 1402	Units:	mg/L	Final Weight/Volu	me: 10 mL
Prep Date:	N/A		-	-	
Leach Date:	N/A				
Analyte		Spike Amount	Pecult	% Rec	Limit Qual
Thiosyanata			ND	77	Linit Quai
mocyanale		0.100	ND	11	
Lab Control Sam	ple/			Method: SM 450	DO CN M
Lab Control Sam	ple Duplicate Recovery F	Report - Batch: 70	0-104116	Preparation: N/	A
LCS Lab Sample ID:	LCS 700-104116/4	Analysis Batch	n: 700-104116	Instrument ID:	KONELAB
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	DATA08.04.11A1SCN.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volu	ıme: 10 mL
Analysis Date:	08/04/2011 1402	Units:	mg/L	Final Weight/Volu	me: 10 mL
Prep Date:	N/A				
Leach Date:	N/A				
LCSD Lab Sample II	D: LCSD 700-104116/5	Analysis Batch	n: 700-104116	Instrument ID:	KONELAB
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	DATA08.04.11A1SCN.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volu	ıme: 10 mL
Analysis Date:	08/04/2011 1402	Units:	mg/L	Final Weight/Volu	me: 10 mL
Prep Date:	N/A				
Leach Date:	N/A				
		<u>% Rec.</u>			
Analyte		LCS LCS	D Limit	RPD RPD) Limit LCS Qual LCSD Qual
Thiocyanate		103 102	80 - 120	1.3 25.0	
Laboratory Contro	ol/			Method: SM 4500) CN M
Laboratory Duplic	cate Data Report - Batch:	700-104116		Preparation: N/A	
LCS Lab Sample ID:	: LCS 700-104116/4	Units: mg/l	-	LCSD Lab Sample	ID: LCSD 700-104116/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	00/04/2011 1402 N/A			Analysis Date:	08/04/2011 1402
Fiep Date.	N/A N/A			Loach Date:	
LEAGH Dale.	IN/A				N/A
Analyte		LCS Spike	LCSD Spike	LCS	
-		Amount	Amount		
Thiocyanate		1.00	1.00	1.04	1.02

Quality Control Results

Job Number: 400-58168-2

Method: SM 4500 CN M Preparation: N/A

MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	700-60198-A-2 MS Water 1.0 08/04/2011 1402 N/A N/A	Anal Prep Leac	ysis Batch: Batch: h Batch:	700-104116 N/A N/A	Instrumer Lab File I Initial We Final Wei	nt ID: D: ight/Volume: ght/Volume:	KONELAE DATA08.0 10 mL 10 mL	3 4.11A1SCN.
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	2: 700-60198-A-2 MSD Water 1.0 08/04/2011 1402 N/A N/A	Anal Prep Leac	ysis Batch: Batch: h Batch:	700-104116 N/A N/A	Instrumer Lab File I Initial We Final Wei	nt ID: D: ight/Volume: ght/Volume:	KONELAE DATA08.0 10 mL 10 mL	3 4.11A1SCN.
Analyte		<u>%</u> MS	Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Thiocyanate		113	113	75 - 125	0	25		
Matrix Spike/ Matrix Spike Dupl	licate Recovery Report -	Batch: 70	0-104116		Method: S Preparation	SM 4500 CN on: N/A	N M	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	700-60198-A-2 MS Water 1.0 08/04/2011 1402 N/A N/A	Un	its: mg/L		MSD Lab S Client Matr Dilution: Analysis Date: Prep Date: Leach Date	Sample ID: ix: ate: e:	700-60198-A- Water 1.0 08/04/2011 1 N/A N/A	2 MSD 402
Analyte		Sample Result/0	Qual	MS Spike Amount	MSD Spike Amount	MS Result/Q	MS Qual Res	D sult/Qual
Thiocyanate		0.25		1.00	1.00	1.38	1.3	3

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 700-104116

Submission Oode:	CH	INTERNATIONAL AN AIN OF CUSTODY RECORD (E	ALYTICAL GF JEP 62-770.900 (ROUP 1400 modified form))	-58168	FDEP Facility No.	
Ordees:	5555 P1	HOLLYWOOD BOULEVARD, SUITE HONE: 954-894-4023 • FAX: 954-894	5 301, HOLLYWOOD 1-4501 • CELLULAR), FLORIDA 33021 :: 954-494-3272		Sampling CompQAP No	
Ori	jinal - Return w/ Report	Yellow - Lat	o Copy		Pink - Sampler Copy		
Report To: C. L. Fuvironnet	-1 C. C.H.		Report To Address:				
	ANALYTICAL GR	oup (IAG)	Billing Address: P.C). BOX 814407	, HOLLYWOOD,	FLORIDA 3308	1-4407
Project Number/Name: HUS / an	4			-	Site Location: AU	y an Gol	1 Mine
Project Contact: Cont from Control	Pell P	hone: 876-371-2267	FAX:				
Alternate Contact: Maftlew Let	<u>с</u> ,	hone: 876-439-9534	FAX:				
Sampled By (print): Mar H Cu Le	2	/	Sampler's Signature				
	о — — ш	MATRIX SAMPLE LOCATION/ JOB DESCRIPTION	#	ANALYS	IS REQUIRED		Sample Condition
T E SAMPLE ID COLLECTED COL	TIME C P Z C P Z C C P Z C C C C C C C C C C C C C C C C C C C	DW SW GW (optional if needed SED when samples are from	°02⊢	PLACE NAME C TESTS NEEDED IECK OFF WHICH SAMPLI	r Method Number of In Large Boxes Below. E items Need Each test f	PERFORMED	emp <u>0.0</u> C
_≥ Page 33	L L D	S different site locations) EFF HW BIO SA SA	 A TPH Cyanicle S This yant 	Copre Lead Zinc Merium	Arsenic Mar Arsenic TP Cyanide TP	.H.	Lot Number of Sampling Containers Used
10 AJ11 26/7/11		SW	T V	7			
²⁶⁰ AJ 13 4		SW	ر ۲	7			
° AJS 2 ~		2		-	7 7		
4 0							
ω				-			
Z							
10							
Special Comments: Quar (reoults to	clenvire Och	Jouralica Total # of Containers:	QA/QC Repor	t Needed?: Ye	s No (See price guide f	or applicable fees)	
)	. Cor	Report Forma	t: Standard	Other (specify)		
(1) Relinquished by Signature:	26 [7/1]	(2) Relinquished by Signature:		Date:	DUE DATE REQUESTED: Confirmation #		
Company: C.L. Euvironments	Time:	Company:	7	Time:	Coating Code:		a / L / Đ
(1) Received by Signature:	Date:	(2) Received by Signature:		Date:20111	Miso. Charges		
Company:	Time:	Company:		Timegras	SHADED AR	EAS ARE FOR LAB USE	ONEY

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DATA REPORTING QUALIFIERS

Client: CL Environmental

Lab Section	Qualifier	Description	
GC Semi VOA			
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.	
	х	Surrogate is outside control limits	
Metals			
	F	MS or MSD exceeds the control limits	

Login Number: 58168 List Number: 1

Creator: Hor, Koma

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-58168-2

List Source: TestAmerica Pensacola

Login Number: 58168 List Number: 1

Creator: Paengpongsavanh, Khamsaeo H

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-58519-1 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-58519-1 Job Description: AusJam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elvered

Approved for release. Marty Edwards Senior Project Manager 8/15/2011 3:30 PM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 08/15/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc. TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514 Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com



METHOD SUMMARY

Client: CL Environmental			Job Number: 400-58519-1
Description	Lab Location	Method	Preparation Method
Matrix Water			
Cyanide Distillation, Cyanide	TAL PEN	EPA 335.2	Distill/CN
Lab References:			
TAL PEN = TestAmerica Pensacola			
Method References:			
EPA = US Environmental Protection Agency			

METHOD / ANALYST SUMMARY

Job Number: 400-58519-1

Analyst ID

BΒ

Method Analyst EPA 335.2 Brooks, Barbara

Page 3 of 21

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
400-58519-1	AJ 20	Water	08/09/2011 0830	08/11/2011 1029
400-58519-2	AJ 21	Water	08/09/2011 0830	08/11/2011 1029
400-58519-3	AJ 22	Water	08/09/2011 0830	08/11/2011 1029
400-58519-4	AJ 23	Water	08/09/2011 1030	08/11/2011 1029
400-58519-5	AJ 24	Water	08/09/2011 1030	08/11/2011 1029
400-58519-6	AJ 25	Water	08/09/2011 1030	08/11/2011 1029
400-58519-7	AJ 26	Water	08/09/2011 1700	08/11/2011 1029
400-58519-8	AJ 27	Water	08/09/2011 1700	08/11/2011 1029
400-58519-9	AJ 28	Water	08/09/2011 1700	08/11/2011 1029

SAMPLE RESULTS
Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 20							
Lab Sample ID:	400-58519-1				I	Date Sampled	I: 08/09/2011 0830	
Client Matrix:	Water				I	Date Receive	d: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		29		mg/L	1.0	200	335.2	
	Analysis Batch: 400-	137111	Analysis Date:	08/12/2011 1720				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 21							
Lab Sample ID:	400-58519-2				[Date Sampled	1: 08/09/2011 0830	
Client Matrix:	Water				I	Date Receive	d: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		31		mg/L	0.50	100	335.2	
	Analysis Batch: 400-	137111	Analysis Date:	08/12/2011 0916				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 22							
Lab Sample ID:	400-58519-3					Date Sampled	: 08/09/2011 0830	
Client Matrix:	Water					Date Received	d: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		44		mg/L	1.0	200	335.2	
	Analysis Batch: 400-	137111	Analysis Date:	08/15/2011 1255				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 23							
Lab Sample ID:	400-58519-4				D	ate Sampled	I: 08/09/2011 1030	
Client Matrix:	Water				D	ate Receive	d: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		44		mg/L	0.50	100	335.2	
	Analysis Batch: 400-	137111	Analysis Date:	08/12/2011 0924				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 24							
Lab Sample ID:	400-58519-5					Date Sample	d: 08/09/2011 1030	
Client Matrix:	Water					Date Receive	ed: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		24		mg/L	0.25	50	335.2	
	Analysis Batch: 400-	137111	Analysis Date:	08/12/2011 0932				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 25							
Lab Sample ID:	400-58519-6				D	ate Sample	d: 08/09/2011 1030	
Client Matrix:	Water				D	ate Receive	ed: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		17		mg/L	0.25	50	335.2	
	Analysis Batch: 400-7	137111	Analysis Date:	08/12/2011 1040				
	Prep Batch: 400-1370	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 26							
Lab Sample ID:	400-58519-7					Date Sample	d: 08/09/2011 1700	0
Client Matrix:	Water					Date Receive	d: 08/11/2011 1029	9
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		20		mg/L	0.25	50	335.2	-
	Analysis Batch: 400-	137111	Analysis Date:	08/12/2011 0940				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 27							
Lab Sample ID:	400-58519-8				[Date Sample	d: 08/09/2011 170	
Client Matrix:	Water				I	Date Receive	ed: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		24		mg/L	0.25	50	335.2	
	Analysis Batch: 400-	137111	Analysis Date:	08/12/2011 0947				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 28							
Lab Sample ID:	400-58519-9					Date Sample	d: 08/09/2011 1700	
Client Matrix:	Water					Date Receive	d: 08/11/2011 1029	
Analyte		Result	Qual	Units	RL	Dil	Method	
Cyanide, Total		7.2		mg/L	0.10	20	335.2	
	Analysis Batch: 400-	137111	Analysis Date:	08/12/2011 0947				
	Prep Batch: 400-137	026	Prep Date: 08/	11/2011 1415				

QUALITY CONTROL RESULTS

Client: CL Environmental

Job Number: 400-58519-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 400-137026					
LCS 400-137026/2-A	Lab Control Sample	Т	Water	Distill/CN	
MB 400-137026/1-A	Method Blank	Т	Water	Distill/CN	
400-58519-1	AJ 20	Т	Water	Distill/CN	
400-58519-1MS	Matrix Spike	Т	Water	Distill/CN	
400-58519-1MSD	Matrix Spike Duplicate	Т	Water	Distill/CN	
400-58519-2	AJ 21	Т	Water	Distill/CN	
400-58519-3	AJ 22	Т	Water	Distill/CN	
400-58519-4	AJ 23	Т	Water	Distill/CN	
400-58519-5	AJ 24	Т	Water	Distill/CN	
400-58519-6	AJ 25	Т	Water	Distill/CN	
400-58519-7	AJ 26	Т	Water	Distill/CN	
400-58519-8	AJ 27	Т	Water	Distill/CN	
400-58519-9	AJ 28	Т	Water	Distill/CN	
Analysis Batch:400-1371	11				
LCS 400-137026/2-A	Lab Control Sample	Т	Water	335.2	400-137026
MB 400-137026/1-A	Method Blank	Т	Water	335.2	400-137026
400-58519-1	AJ 20	Т	Water	335.2	400-137026
400-58519-1MS	Matrix Spike	Т	Water	335.2	400-137026
400-58519-1MSD	Matrix Spike Duplicate	Т	Water	335.2	400-137026
400-58519-2	AJ 21	Т	Water	335.2	400-137026
400-58519-3	AJ 22	Т	Water	335.2	400-137026
400-58519-4	AJ 23	Т	Water	335.2	400-137026
400-58519-5	AJ 24	Т	Water	335.2	400-137026
400-58519-6	AJ 25	Т	Water	335.2	400-137026
400-58519-7	AJ 26	Т	Water	335.2	400-137026
400-58519-8	AJ 27	Т	Water	335.2	400-137026
400-58519-9	AJ 28	Т	Water	335.2	400-137026

Report Basis

T = Total

Client: CL Environmental

Method Blank - Ba	atch: 400-137026			Method: 33 Preparation	5.2 n: Distill/C	N	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-137026/1-A Water 1.0 08/13/2011 1046 08/11/2011 1415 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	: 400-137111 400-137026 N/A mg/L	Instrument IE Lab File ID: Initial Weight Final Weight	D: t/Volume: t/Volume:	KONELAB N/A 50 mL 50 mL	
Analyte		R	esult	Qual		RL	
Cyanide, Total		Ν	D	0.0050			
Lab Control Samp	ble - Batch: 400-137026			Method: 33 Preparation	5.2 n: Distill/C	N	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-137026/2-A Water 1.0 08/13/2011 1046 08/11/2011 1415 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	: 400-137111 400-137026 N/A mg/L	Instrument II Lab File ID: Initial Weight Final Weight	D: t/Volume: /Volume:	KONELAB N/A 50 mL 50 mL	
Analyte		Spike Amount	Result	% Rec.	Limit		Qual
Cyanide, Total		0.346	0.375	108	85 -	115	
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report -	Batch: 400-1370	026	Method: 33 Preparation	5.2 n: Distill/C	N	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-58519-1 Water 200 08/12/2011 1720 08/11/2011 1415 N/A	Analysis Ba Prep Batch: Leach Batcl	tch: 400-137111 400-137026 h: N/A	Instrument IE Lab File ID: Initial Weight Final Weight	D: t/Volume: t/Volume:	KONELAB N/A 50 mL 50 mL	
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	2: 400-58519-1 Water 200 08/12/2011 1720 08/11/2011 1415 N/A	Analysis Ba Prep Batch: Leach Batcl	tch: 400-137111 400-137026 h: N/A	Instrument IE Lab File ID: Initial Weight Final Weight	D: t/Volume: /Volume:	KONELAB N/A 50 mL 50 mL	
Ameluta		<u>% Rec.</u>	D 1 1 14			MC Our-	
Analyte		MS MS	U Limit	RPD F	KPD Limit	MS Qual	MSD Qual
Cyanide, Total		18520 195	68 - 133	3 3	6	4	4

Job Number: 400-58519-1

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-137026

Method: 335.2 Preparation: Distill/CN

MS Lab Sample ID:	400-58519-1	Units: mg/L		MSD Lab Sam	ple ID:	400-58519-1
Client Matrix:	Water			Client Matrix:		Water
Dilution:	200			Dilution:		200
Analysis Date:	08/12/2011 1720			Analysis Date:		08/12/2011 1720
Prep Date:	08/11/2011 1415			Prep Date:		08/11/2011 1415
Leach Date:	N/A			Leach Date:		N/A
		Sample	MS Spike	MSD Spike	MS	MSD

Analyte	Result/Qual	Amount	Amount	Result/Qua	al	Result/Qual	
Cyanide, Total	29	0.200	0.200	66.0	4	68.0	4

DATA REPORTING QUALIFIERS

Client: CL Environmental

Lab Section	Qualifier	Description
General Chemistry		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Interest to litins: Interest to litins: Interest to litins: Internate contact: Project Contact: P	Anner Coulecter Control Anner Coulecter Control Anner Coulecter Co	CH Hetum W Report Return W Return W Report Return W Report Return W Return W Retu	INTERNATIONAL INTERNATIONAL HOLLYWOOD BOULEVARD, S HONE: 954-894-4023 • FAX: 95. Vellow Vellow NATRIX M	ANALYTICAL G D (DEP 62-770.9000 UITE 301, HOLLYWOO H894-4501 • CELLULAI Billing Address: Pi Report To Address: Sampler's Signature Sampler's Signature C 2 P C 2 Report Formine	Boup (Liou 5 % D, FLORIDA 33021 Pini Pini Pini 22 Fart 9% D. BOX 814407, HO D. BOX 814407, HO Place name of merric Rite Lo Rite Lo <t< th=""><th>5 [9] FDEP Facility No. Page Page - Sampling CompOAP Sampling CompOAP - Sampler Copy Approval Date: - Sampler Copy I.LIWOOD, FLORIDA 3; Approval Date: I.LIWOOD, FLORIDA 4; Approval Date: I.LIWOOD, FLORIDA 4;</th><th>No. No. Sample Condition as Received: Lot Number of Sampling Containers Used Vo C</th></t<>	5 [9] FDEP Facility No. Page Page - Sampling CompOAP Sampling CompOAP - Sampler Copy Approval Date: - Sampler Copy I.LIWOOD, FLORIDA 3; Approval Date: I.LIWOOD, FLORIDA 4; Approval Date: I.LIWOOD, FLORIDA 4;	No. No. Sample Condition as Received: Lot Number of Sampling Containers Used Vo C
many: CL ONULS	mated	7/8/11 Time: 9.000m	(ג) הפוווקטוויט טיטוומטני. Company:		Time: Cont	Arte REQUESTED: mation # ig Code:	Q / L / D
Received by Signature:		Date:	(2) Received by Signature.		Date 11/11 Misc	Charges	

Client: CL Environmental

Login Number: 58519 List Number: 1

Creator: Hor, Koma

Answer	Comment
N/A	
N/A	
True	
True	
True	
True	0.0°C
True	
	Answer N/A N/A True True

Job Number: 400-58519-1

List Source: TestAmerica Pensacola



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-59137-1 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-59137-1 Job Description: AusJam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elwared

Approved for release. Marty Edwards Senior Project Manager 9/12/2011 8:12 AM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 09/12/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc.TestAmerica Pensacola3355 McLemore Drive, Pensacola, FL 32514Tel (850) 474-1001Fax (850) 478-2671www.testamericainc.com



Job Narrative 400-59137-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

General Chemistry

Method SM 4500 CN I: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 700-105747 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: CL Environmental

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method	
400-59137-1	AJ 1	10					
Cyanide, Total		12		0.25	mg/L	335.2	
Cyanide, Free		3.1		0.10	mg/L	SM 4500 CN I	
400-59137-2	AJ 2						
Cyanide, Total		13		0.25	mg/L	335.2	
Cyanide, Free		3.9		0.10	mg/L	SM 4500 CN I	
400-59137-3	AJ 3						
Cvanide. Total		14		0.25	ma/L	335.2	
Cyanide, Free		2.9		0.10	mg/L	SM 4500 CN I	
400-59137-4	AJ 4						
Cyanide, Total		8.0		0.10	mg/L	335.2	
Cyanide, Free		3.7		0.10	mg/L	SM 4500 CN I	
400-59137-5	AJ 5						
Cyanide, Total		0.14		0.0050	mg/L	335.2	
Cyanide, Free		0.050		0.010	mg/L	SM 4500 CN I	
400-59137-6	AJ 6						
Cyanide, Total		20		0.25	mg/L	335.2	
Cyanide, Free		3.0		0.10	mg/L	SM 4500 CN I	
400-59137-7	AJ 7						
Cyanide, Total		18		0.25	mg/L	335.2	
Cyanide, Free		4.3		0.10	mg/L	SM 4500 CN I	
400-59137-8	AJ 8						
Cyanide, Total		22		0.25	mg/L	335.2	
Cyanide, Free		3.2		0.10	mg/L	SM 4500 CN I	

METHOD SUMMARY

Client: CL Environmental

Description	Lab Location	Method	Preparation Method
Matrix Water			
Cyanide Distillation, Cyanide	TAL PEN	EPA 335.2	Distill/CN
Cyanide, Weak Acid Dissociable Cyanide: Distillation	TAL MOB	SM SM 4500 CN	I SM SM 4500 CN C
Lab References:			
TAL MOB = TestAmerica Mobile			
TAL PEN = TestAmerica Pensacola			
Method References:			

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

METHOD / ANALYST SUMMARY

Method	Analyst	Analyst ID
EPA 335.2	Brooks, Barbara	BB
SM SM 4500 CN I	Hollins, Shelinda D	SDH

Client: CL Environmental

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
400-59137-1	AJ 1	Water	09/02/2011 1000	09/07/2011 1029
400-59137-2	AJ 2	Water	09/02/2011 1030	09/07/2011 1029
400-59137-3	AJ 3	Water	09/02/2011 1050	09/07/2011 1029
400-59137-4	AJ 4	Water	09/02/2011 1120	09/07/2011 1029
400-59137-5	AJ 5	Water	09/02/2011 1130	09/07/2011 1029
400-59137-6	AJ 6	Water	09/02/2011 1230	09/07/2011 1029
400-59137-7	AJ 7	Water	09/02/2011 1300	09/07/2011 1029
400-59137-8	AJ 8	Water	09/02/2011 1315	09/07/2011 1029

SAMPLE RESULTS

Client: CL Environmental

General Chemistry					
Client Sample ID:	AJ 1				
Lab Sample ID:	400-59137-1		[Date Sampled	d: 09/02/2011 1000
Client Matrix:	Water		ſ	Date Receive	d: 09/07/2011 1029
Analyte	Result	Qual Units	RL	Dil	Method
Cyanide, Total	12	mg/L	0.25	50	335.2
	Analysis Batch: 400-138856	Analysis Date: 09/08/2011 1411			
	Prep Batch: 400-138722	Prep Date: 09/07/2011 1530			
Cyanide, Free	3.1	mg/L	0.10	10	SM 4500 CN I
	Analysis Batch: 700-105747	Analysis Date: 09/09/2011 1537			
	Prep Batch: 700-105689	Prep Date: 09/09/2011 0810			

Client: CL Environmental

General Chemistry					
Client Sample ID:	AJ 2				
Lab Sample ID:	400-59137-2		Γ	Date Sampled	d: 09/02/2011 1030
Client Matrix:	Water		ſ	Date Receive	d: 09/07/2011 1029
Analyte	Result	Qual Units	RL	Dil	Method
Cyanide, Total	13	mg/L	0.25	50	335.2
	Analysis Batch: 400-138856	Analysis Date: 09/08/2011 1411			
	Prep Batch: 400-138722	Prep Date: 09/07/2011 1530			
Cyanide, Free	3.9	mg/L	0.10	10	SM 4500 CN I
	Analysis Batch: 700-105747	Analysis Date: 09/09/2011 1537			
	Prep Batch: 700-105689	Prep Date: 09/09/2011 0810			

Client: CL Environmental

General Chemistry					
Client Sample ID:	AJ 3				
Lab Sample ID:	400-59137-3		[Date Sample	d: 09/02/2011 1050
Client Matrix:	Water		ſ	Date Receive	d: 09/07/2011 1029
Analyte	Result	Qual Units	RL	Dil	Method
Cyanide, Total	14	mg/L	0.25	50	335.2
	Analysis Batch: 400-138856	Analysis Date: 09/08/2011 1419			
	Prep Batch: 400-138722	Prep Date: 09/07/2011 1530			
Cyanide, Free	2.9	mg/L	0.10	10	SM 4500 CN I
	Analysis Batch: 700-105747	Analysis Date: 09/09/2011 1537			
	Prep Batch: 700-105689	Prep Date: 09/09/2011 0810			

Client: CL Environmental

General Chemistry					
Client Sample ID:	AJ 4				
Lab Sample ID:	400-59137-4		Γ	Date Sampled	d: 09/02/2011 1120
Client Matrix:	Water		ſ	Date Receive	d: 09/07/2011 1029
Analyte	Result	Qual Units	RL	Dil	Method
Cyanide, Total	8.0	mg/L	0.10	20	335.2
	Analysis Batch: 400-138856	Analysis Date: 09/08/2011 1426			
	Prep Batch: 400-138722	Prep Date: 09/07/2011 1530			
Cyanide, Free	3.7	mg/L	0.10	10	SM 4500 CN I
	Analysis Batch: 700-105747	Analysis Date: 09/09/2011 1537			
	Prep Batch: 700-105689	Prep Date: 09/09/2011 0810			

Client: CL Environmental

		General Chemistry			
Client Sample ID:	AJ 5				
Lab Sample ID:	400-59137-5		Da	ate Sampled	d: 09/02/2011 1130
Client Matrix:	Water		Da	ate Receive	d: 09/07/2011 1029
Analyte	Result	Qual Units	RL	Dil	Method
Cyanide, Total	0.14	mg/L	0.0050	1.0	335.2
	Analysis Batch: 400-138856	Analysis Date: 09/08/2011 1516			
	Prep Batch: 400-138722	Prep Date: 09/07/2011 1530			
Cyanide, Free	0.050	mg/L	0.010	1.0	SM 4500 CN I
-	Analysis Batch: 700-105747	Analysis Date: 09/09/2011 1537			
	Prep Batch: 700-105689	Prep Date: 09/09/2011 0810			

Client: CL Environmental

		General Chemistry			
Client Sample ID:	AJ 6				
Lab Sample ID:	400-59137-6		[Date Sampled	d: 09/02/2011 1230
Client Matrix:	Water		ſ	Date Receive	d: 09/07/2011 1029
Analyte	Result	Qual Units	RL	Dil	Method
Cyanide, Total	20	mg/L	0.25	50	335.2
	Analysis Batch: 400-138856	Analysis Date: 09/08/2011 1434			
	Prep Batch: 400-138722	Prep Date: 09/07/2011 1530			
Cyanide, Free	3.0	mg/L	0.10	10	SM 4500 CN I
	Analysis Batch: 700-105747	Analysis Date: 09/09/2011 1537			
	Prep Batch: 700-105689	Prep Date: 09/09/2011 0810			

Client: CL Environmental

General Chemistry						
Client Sample ID:	AJ 7					
Lab Sample ID: Client Matrix:	400-59137-7 Water		C C)ate Sampled)ate Received	: 09/02/2011 1300 d: 09/07/2011 1029	
Analyte	Resul	Qual Units	RL	Dil	Method	
Cyanide, Total	18 Analysis Batch: 400-138856 Prep Batch: 400-138722	mg/L Analysis Date: 09/08/2011 1442 Prep Date: 09/07/2011 1530	0.25	50	335.2	
Cyanide, Free	4.3 Analysis Batch: 700-105747 Prep Batch: 700-105689	mg/L Analysis Date: 09/09/2011 1537 Prep Date: 09/09/2011 0810	0.10	10	SM 4500 CN I	

Client: CL Environmental

General Chemistry						
Client Sample ID:	AJ 8					
Lab Sample ID:	400-59137-8		D	ate Sampleo	d: 09/02/2011 1315	
Client Matrix:	Water		D	ate Receive	d: 09/07/2011 1029	
Analyte	Result	Qual Units	RL	Dil	Method	
Cyanide, Total	22	mg/L	0.25	50	335.2	
	Analysis Batch: 400-138856	Analysis Date: 09/08/2011 1450				
	Prep Batch: 400-138722	Prep Date: 09/07/2011 1530				
Cyanide, Free	3.2	mg/L	0.10	10	SM 4500 CN I	
-	Analysis Batch: 700-105747	Analysis Date: 09/09/2011 1537				
	Prep Batch: 700-105689	Prep Date: 09/09/2011 0810				

QUALITY CONTROL RESULTS

Client: CL Environmental

Job Number: 400-59137-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 700-105689					
LCS 700-105689/2-A	Lab Control Sample	Т	Water	SM 4500 CN C	
LCSD 700-105689/3-A	Lab Control Sample Duplicate	Т	Water	SM 4500 CN C	
MB 700-105689/1-A	Method Blank	т	Water	SM 4500 CN C	
400-59137-1	AJ 1	т	Water	SM 4500 CN C	
400-59137-2	AJ 2	т	Water	SM 4500 CN C	
400-59137-3	AJ 3	т	Water	SM 4500 CN C	
400-59137-4	AJ 4	т	Water	SM 4500 CN C	
400-59137-5	AJ 5	т	Water	SM 4500 CN C	
400-59137-6	AJ 6	т	Water	SM 4500 CN C	
400-59137-6MS	Matrix Spike	т	Water	SM 4500 CN C	
400-59137-6MSD	Matrix Spike Duplicate	Т	Water	SM 4500 CN C	
400-59137-7	AJ 7	Т	Water	SM 4500 CN C	
400-59137-8	AJ 8	T	Water	SM 4500 CN C	
Analysis Batch:700-1057	47				
LCS 700-105689/2-A	Lab Control Sample	Т	Water	SM 4500 CN I	700-105689
LCSD 700-105689/3-A	Lab Control Sample Duplicate	Т	Water	SM 4500 CN I	700-105689
MB 700-105689/1-A	Method Blank	Т	Water	SM 4500 CN I	700-105689
400-59137-1	AJ 1	Т	Water	SM 4500 CN I	700-105689
400-59137-2	AJ 2	Т	Water	SM 4500 CN I	700-105689
400-59137-3	AJ 3	Т	Water	SM 4500 CN I	700-105689
400-59137-4	AJ 4	Т	Water	SM 4500 CN I	700-105689
400-59137-5	AJ 5	Т	Water	SM 4500 CN I	700-105689
400-59137-6	AJ 6	т	Water	SM 4500 CN I	700-105689
400-59137-6MS	Matrix Spike	Т	Water	SM 4500 CN I	700-105689
400-59137-6MSD	Matrix Spike Duplicate	т	Water	SM 4500 CN I	700-105689
400-59137-7	AJ 7	т	Water	SM 4500 CN I	700-105689
400-59137-8	AJ 8	Т	Water	SM 4500 CN I	700-105689
Prop Batch: 400 139722					
I CS 400-138722/2-4	Lah Control Sample	т	Water	Distill/CN	
MB /00-138722/1-A	Method Blank	т Т	Water	Distill/CN	
100-50137-1		т Т	Water	Distill/CN	
400-59137-1		т Т	Water	Distill/CN	
400-59137-2		ч т	Water	Distill/CN	
400-59137-5		, т	Water	Distill/CN	
100-53137-4		г Т	Water	Distill/CN	
400-59137-5	AU 6	י ד	Water		
400-09107-0		і т	Water	Distill/CN	
400-39137-7	AJ /	ו ד	Water	Distill/CN	
400-5913/-/DU		1 	vvaler Water	Distill/CN	
400-59137-8	AJδ	I	vvater	DISTIII/CIN	

Client: CL Environmental

Job Number: 400-59137-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:400-138	856				
LCS 400-138722/2-A	Lab Control Sample	Т	Water	335.2	400-138722
MB 400-138722/1-A	Method Blank	Т	Water	335.2	400-138722
400-59137-1	AJ 1	Т	Water	335.2	400-138722
400-59137-2	AJ 2	Т	Water	335.2	400-138722
400-59137-3	AJ 3	Т	Water	335.2	400-138722
400-59137-4	AJ 4	Т	Water	335.2	400-138722
400-59137-5	AJ 5	Т	Water	335.2	400-138722
400-59137-6	AJ 6	Т	Water	335.2	400-138722
400-59137-7	AJ 7	Т	Water	335.2	400-138722
400-59137-7DU	Duplicate	Т	Water	335.2	400-138722
400-59137-8	AJ 8	Т	Water	335.2	400-138722

Report Basis

T = Total

TestAmerica Pensacola

Quality Control Results

Job Number: 400-59137-1

Method: 335.2

Preparation: Distill/CN

Client: CL Environmental

Method Blank - Batch: 400-138722

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 400-138722/1-A Water 1.0 09/08/2011 1014 09/07/2011 1530 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-138856 400-138722 N/A mg/L		Instrument ID: Lab File ID: Initial Weight/Volur Final Weight/Volun	me: ne:	KONELAB N/A 50 mL 50 mL	
Analyte		Resi	ult	Qua	al		RL	
Cyanide, Total		ND					0.005	50
Lab Control Sam	ple - Batch: 400-138722				Method: 335.2 Preparation: Dis	till/CN		
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 400-138722/2-A Water 1.0 09/08/2011 1516 09/07/2011 1530 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-138856 400-138722 N/A mg/L		Instrument ID: Lab File ID: Initial Weight/Volur Final Weight/Volun	me: ne:	KONELAB N/A 50 mL 50 mL	
Analyte		Spike Amount	Result	c	% Rec.	Limit		Qual
Cyanide, Total		0.346	0.364		105	85 - 1	15	
Duplicate - Batch	: 400-138722				Method: 335.2 Preparation: Dis	till/CN		
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-59137-7 Water 50 09/08/2011 1442 09/07/2011 1530 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	400-138856 400-138722 N/A mg/L		Instrument ID: Lab File ID: Initial Weight/Volur Final Weight/Volun	me: ne:	KONELAB N/A 50 mL 50 mL	
Analyte		Sample Result/0	Qual	Result	RPD		Limit	Qual
Cyanide, Total		18		22.2	19		36	

Page 19 of 25
TestAmerica Pensacola

Quality Control Results

Job Number: 400-59137-1

Method: SM 4500 CN I

Client: CL Environmental

Method Blank - Batch: 700-105689

				Preparation: SM 45	500 CN C	
Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	Sample ID: MB 700-105689/1-A nt Matrix: Water tion: 1.0 lysis Date: 09/09/2011 1537 o Date: 09/09/2011 0810 ch Date: N/A		700-105747 700-105689 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume Final Weight/Volume:	Other N/A 50 mL 50 mL	
Analyte		Re	sult	Qual	RL	
Cyanide, Free		ND			0.010	
Lab Control Sam	ple/ ple Duplicate Recovery Re	eport - Batch: 70	00-105689	Method: SM 4500 0 Preparation: SM 45	CN I 500 CN C	
LCS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 700-105689/2-A Water 1.0 09/09/2011 1537 09/09/2011 0810 N/A	Analysis Bato Prep Batch: Leach Batch: Units:	ch: 700-105747 700-105689 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Other N/A : 50 mL 50 mL	
-CSD Lab Sample II Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	D: LCSD 700-105689/3-A Water 1.0 09/09/2011 1537 09/09/2011 0810 N/A	Analysis Batc Prep Batch: Leach Batch: Units:	h: 700-105747 700-105689 N/A mg/L	Instrument ID: Lab File ID: Initial Weight/Volume Final Weight/Volume:	Other N/A 50 mL 50 mL	
Analyte		<u>% Rec.</u> LCS LC	SD Limit	RPD RPD Lin	nit LCS Qual LCSD Qual	
Cyanide, Free		92 93	80 - 120	1 30		
Laboratory Contro Laboratory Duplic	ol/ cate Data Report - Batch:	700-105689		Method: SM 4500 CM Preparation: SM 450	N I 10 CN C	
LCS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCS 700-105689/2-A Water 1.0 09/09/2011 1537 09/09/2011 0810 N/A	Units: mg	ΛL	LCSD Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	LCSD 700-105689/3-A Water 1.0 09/09/2011 1537 09/09/2011 0810 N/A	
Analyte		LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual	
Cyanide, Free		0.532	0.532	0.492	0.495	

Quality Control Results

Job Number: 400-59137-1

Client: CL Environmental

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 700-105689

Method: SM 4500 CN I Preparation: SM 4500 CN C

MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-59137-6 Water 10 09/09/2011 1537 09/09/2011 0810 N/A	Anal Prep Leac	ysis Batch: Batch: h Batch:	700-105747 700-105689 N/A	Instrumer Lab File I Initial We Final We	nt ID: ID: ight/Volume: ight/Volume:	Other N/A 50 mL 50 mL	
MSD Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	: 400-59137-6 Water 10 09/09/2011 1537 09/09/2011 0810 N/A	Anal Prep Lead	ysis Batch: Batch: h Batch:	700-105747 700-105689 N/A	Instrumen Lab File I Initial We	nt ID: ID: ight/Volume: ight/Volume:	Other N/A 50 mL 50 mL	
		<u>%</u>	Rec.					
Analyte		MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Free		-25	-191	75 - 125	37	25	4	4 F
Matrix Spike/ Matrix Spike Dupl	icate Recovery Report	- Batch: 70	0-105689		Method: S Preparati	SM 4500 CN on: SM 450	1 I 0 CN C	
MS Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	400-59137-6 Water 10 09/09/2011 1537 09/09/2011 0810 N/A	Un	its: mg/L		MSD Lab S Client Matr Dilution: Analysis D Prep Date: Leach Date	Sample ID: rix: ate: e:	400-59137-6 Water 10 09/09/2011 09/09/2011 N/A	1537 0810
Angluto		Sample		MS Spike	MSD Spike	MS	M	SD

DATA REPORTING QUALIFIERS

Client: CL Environmental

Job Number: 400-59137-1

Lab Section	Qualifier	Description
General Chemistry		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	F	RPD of the MS and MSD exceeds the control limits

ASH Days	59137 Sampling CompGAP No	nk - Sampler Copy	van Herekts Kgn. 9	OLĹYWOOĎ, FLORIDÁ 33081-4407	ocation: (Laren don JAure 101)				EQUIRED $2 \int \sqrt{C}$ Sample Condition as Received:	HOD NUMBER OF IGE BOXES BELOW. IS NEED EACH TEST PERFORMED Sealed 'Yes: No	Lot Number of Sampling Containers Used									led with Sample I.D. because	 (See price guide for applicable fees) abels MeX 	Other (specify) tearing.	E DATE REQUESTED: firmation #	ating Code: Q./ L./ D	c: Charges	SHADED AREAS ARE FOR LAB USE ONLY
	01, HOLLYWOOD, FLORIDA 33021 -	py Pi	eport To Address: 22 Fwt Ge	Illing Address: P.O. BOX 814407, HO	Site 1	AX:	AX:	ampler's Signature		PLACE NAME OR MET TESTS NEEDED IN LAF	Total Free Ganide Ganide		<i>?</i>		>		\ \ \ \)	* NB-Covers label	CAVGO Report Needed2	Report Format: Standard	Date: DU	Time:	し Date: 04-0-1 (Mis	Time: 10:29
INTERNATIONAL ANA	HOLLYWOOD BOULEVARD, SUITE 34 40NE: 954-894-4023 • FAX: 954-894-44	Yellow - Lab Co		OUP (IAG)		hone: 876-371-2267 F	hone: 876 - 439- 9534 F	S	MATRIX SAMPLE LOCATION/	DW SW GW (optional if needed SED when samples are from	S different site locations) SA	SW .	SW	- /m5	ŚŴ	Σ	Sw .	SW SW	2		Total # of Containers:	RUSH - 2 days 1	(2) Relinquished by Signature:	Company:	(2) Received by Signature:	Company:
CHA	5555 Pt	- Return w/ Report	74	VALYTICAL GR	(Mine	K I		É	с ш ц	ozo ₽ Ha Ha	۵۲۳ <u>:</u>	0 62		0 < >	0 ent	5 012	0 / w		~			Mai (A . Com	Date: $\eta/2/\eta$	Time: 1 2:0-1/1	Date:	Time:
		Original	on Complete	ERNATIONAL AP	uslan gelo	Two Parulass	atten ler	Morthan Ca		DATE COLLECTED COLLEC		9/2/11 10:0	a 21 11 10:30	9/2/11 10:5	a 2/11 11:2	9211 11:31	2:21 11/2 0	9,2,1,1,5,0			ut results to	IVICO @ CW/O	e: Multi	vinnertal		
Submission: Code:	Orders:		Report To: P APLY	Bill To:	Project Number/Name:	Project Contact:	Alternate Contact: \mathcal{M}_{ℓ}	Sampled By (print):		T E SAMPLE ID	 ≥Page 23	- F of	242	3 A 3	4 AJ 4	5 AT 5	6 AJ 6	A 43 7		10	Special Comments: PM0	cler	(1) Relinquished by Signatur	Company: C.L. G.M.	(1) Received by Signature:	Company:

Client: CL Environmental

Login Number: 59137 List Number: 1

Creator: Hor, Koma

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-59137-1

List Source: TestAmerica Pensacola

Client: CL Environmental

Login Number: 59137 List Number: 1

Creator: Nou, Toum N

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
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Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-59137-1

List Source: TestAmerica Mobile

List Creation: 09/08/11 11:42 AM



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-60147-1 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-60147-1 Job Description: Ausjam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elwared

Approved for release. Marty Edwards Senior Project Manager 10/18/2011 4:07 PM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 10/18/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc. TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514 Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com



Job Narrative 400-60147-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

Metals

Method 3010A: The following samples submitted for metals analysis was received with insufficient preservation (pH >2): AJ 1 (400-60147-1), AJ 2 (400-60147-2), AJ 3 (400-60147-3), AJ 4 (400-60147-4), AJ 6 (400-60147-6), AJ 7 (400-60147-7). Adjusted pH to < 2.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

METHOD SUMMARY

Client: CL Environmental

Description	Lab Location	Method	Preparation Method
Matrix Water			
Silver	TAL PEN	SW846 6010B	
Preparation, Total Metals			SW846 3010A
Cyanide	TAL PEN	EPA 335.2	
Distillation, Cyanide			Distill/CN
Lab References:			
TAL PEN = TestAmerica Pensacola			

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Method	Analyst	Analyst ID
SW846 6010B	St. Pere, Gary	GS
EPA 335.2	Brooks, Barbara	BB

Client: CL Environmental

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
400-60147-1	AJ 1	Water	10/13/2011 0903	10/14/2011 1018
400-60147-2	AJ 2	Water	10/13/2011 0913	10/14/2011 1018
400-60147-3	AJ 3	Water	10/13/2011 0925	10/14/2011 1018
400-60147-4	AJ 4	Water	10/13/2011 0938	10/14/2011 1018
400-60147-5	AJ 5	Water	10/13/2011 0950	10/14/2011 1018
400-60147-6	AJ 6	Water	10/13/2011 1020	10/14/2011 1018
400-60147-7	AJ 7	Water	10/13/2011 1026	10/14/2011 1018
400-60147-8	AJ 8	Water	10/13/2011 1034	10/14/2011 1018

Client: CL Environmental

Client Sample ID:	AJ 1					
Lab Sample ID: Client Matrix:	Sample ID:400-60147-1Date Sample Sample ID:Int Matrix:WaterDate Reference					
		601	0B Silver			
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volume	50 mL	
Analysis Date:	10/17/2011 1548			Final Weight/Volume:	50 mL	
Prep Date:	10/14/2011 1723					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Silver		0.014			0.0050	

Client: CL Environmental

Client Sample ID:	AJ 2					
Lab Sample ID: Client Matrix:	Date Sampled: 10/13/2011 0913 Date Received: 10/14/2011 1018					
		601	0B Silver			
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volume	: 50 mL	
Analysis Date:	10/17/2011 1551			Final Weight/Volume	: 50 mL	
Prep Date:	10/14/2011 1723					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Silver		0.023			0.0050	

Client: CL Environmental

Client Sample ID:	AJ 3					
Lab Sample ID: Client Matrix:	400-60147-3 Water			C C	ate Sampl ate Receiv	ed: 10/13/2011 0925 ved: 10/14/2011 1018
		601	0B Silver			
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	650	0 ICP Duo
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volum	e: 50	mL
Analysis Date:	10/17/2011 1555			Final Weight/Volume	e: 50	mL
Prep Date:	10/14/2011 1723					
Analyte		Result (m	ıg/L)	Qualifier		RL
Silver		0.018				0.0050

Client: CL Environmental

Client Sample ID:	AJ 4						
Lab Sample ID: Client Matrix:	400-60147-4 Water	Date Sampled: 10/13/2 Date Received: 10/14/2					
		601	0B Silver			—	
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	6500 ICP Duo		
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A		
Dilution:	1.0			Initial Weight/Volume:	50 mL		
Analysis Date:	10/17/2011 1558			Final Weight/Volume:	50 mL		
Prep Date:	10/14/2011 1723						
Analyte		Result (m	ıg/L)	Qualifier	RL		
Silver		0.023			0.0050		

Client: CL Environmental

Client Sample ID:	AJ 5						
Lab Sample ID: Client Matrix:	400-60147-5 Water	Date Sampled: 10/13 Date Received: 10/14					
		601	0B Silver				
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	6500 ICP Duo		
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A		
Dilution:	1.0			Initial Weight/Volume:	50 mL		
Analysis Date:	10/17/2011 1601			Final Weight/Volume:	50 mL		
Prep Date:	10/14/2011 1723						
Analyte		Result (m	ıg/L)	Qualifier	RL		
Silver		ND			0.0050		

Client: CL Environmental

Client Sample ID:	AJ 6					
Lab Sample ID: Client Matrix:	400-60147-6 Water	Date Sampled: 10/1 Date Received: 10/1				
		601	0B Silver			
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	6500 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A	
Dilution:	1.0			Initial Weight/Volume:	50 mL	
Analysis Date:	10/17/2011 1605			Final Weight/Volume:	50 mL	
Prep Date:	10/14/2011 1723					
Analyte		Result (m	ıg/L)	Qualifier	RL	
Silver		0.025			0.0050	

Client: CL Environmental

Client Sample ID:	AJ 7						
Lab Sample ID: Client Matrix:	400-60147-7 Water		Date Sampled: 10/13/2011 Date Received: 10/14/2011				
		601	0B Silver				
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	650	0 ICP Duo	
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A		
Dilution:	1.0			Initial Weight/Volum	e: 50	mL	
Analysis Date:	10/17/2011 1608			Final Weight/Volume	e: 50	mL	
Prep Date:	10/14/2011 1723						
Analyte		Result (m	ıg/L)	Qualifier		RL	
Silver		0.022				0.0050	

Client: CL Environmental

Client Sample ID:	AJ 8				
Lab Sample ID:	400-60147-8 Water			Date	e Sampled: 10/13/2011 103 e Received: 10/14/2011 101
Chefit Matrix.	Water			Dat	
		601	0B Silver		
Analysis Method:	6010B	Analysis Batch:	400-141933	Instrument ID:	6500 ICP Duo
Prep Method:	3010A	Prep Batch:	400-141801	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/17/2011 1611			Final Weight/Volume:	50 mL
Prep Date:	10/14/2011 1723				
Analyte		Result (m	ıg/L)	Qualifier	RL
Silver		0.025			0.0050

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 1							
Lab Sample ID:	400-60147-1					Date Sampleo	1: 10/13/2011 0903	
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018	
Analyte	R	Result	Qual	Units	RL	Dil	Method	
Cyanide, Total	1:	5		mg/L	0.25	50	335.2	
	Analysis Batch: 400-1419	985	Analysis Date:	10/18/2011 1055				
	Prep Batch: 400-141761		Prep Date: 10/1	14/2011 0935				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 2							
Lab Sample ID:	400-60147-2			Date S	ampled	1: 10/13/2011 0913		
Client Matrix:	Water			Date F	leceive	d: 10/14/2011 1018		
Analyte	Re	sult Qual	Units	RL	Dil	Method		
Cyanide, Total	18		mg/L	0.25	50	335.2		
	Analysis Batch: 400-14198	35 Analysis Date:	10/18/2011 1055					
	Prep Batch: 400-141761	Prep Date: 10/	14/2011 1510					

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 3							
Lab Sample ID:	400-60147-3			Date Sar	npled: 10/13/2011 0925			
Client Matrix:	Water			Date Rec	ceived: 10/14/2011 1018			
Analyte	Re	sult Qual	Units	RL [Dil Method			
Cyanide, Total	15		mg/L	0.25 5	50 335.2			
	Analysis Batch: 400-14198	5 Analysis Date	: 10/18/2011 1102					
	Prep Batch: 400-141761	Prep Date: 10	/14/2011 1510					

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJ 4						
Lab Sample ID:	400-60147-4		Date Sample	ed: 10/13/2011 0938			
Client Matrix:	Water		Date Receiv	ed: 10/14/2011 1018			
Analyte	Resu	lt Qual Units	RL Dil	Method			
Cyanide, Total	16	mg/L	0.25 50	335.2			
	Analysis Batch: 400-141985	Analysis Date: 10/18/2011 1102					
	Prep Batch: 400-141761	Prep Date: 10/14/2011 1510					

Client: CL Environmental

General Chemistry							
Client Sample ID:	AJ 5						
Lab Sample ID:	400-60147-5					Date Sampled	d: 10/13/2011 0950
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Total		0.32		mg/L	0.0050	1.0	335.2
	Analysis Batch: 400-7	141985	Analysis Date:	10/18/2011 1047			
	Prep Batch: 400-141	761	Prep Date: 10/	14/2011 1510			

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 6							
Lab Sample ID:	400-60147-6					Date Sampled	d: 10/13/2011 1020	
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018	
Analyte	R	Result	Qual	Units	RL	Dil	Method	
Cyanide, Total	1	9		mg/L	0.25	50	335.2	
	Analysis Batch: 400-1419	985	Analysis Date:	10/18/2011 1055				
	Prep Batch: 400-141761		Prep Date: 10/1	4/2011 1510				

Client: CL Environmental

General Chemistry								
Client Sample ID:	AJ 7							
Lab Sample ID:	400-60147-7					Date Sampled	d: 10/13/2011 1026	
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018	
Analyte	F	Result	Qual	Units	RL	Dil	Method	
Cyanide, Total	2	23		mg/L	0.25	50	335.2	
	Analysis Batch: 400-141	985	Analysis Date:	10/18/2011 1055				
	Prep Batch: 400-141761	l	Prep Date: 10/1	4/2011 1510				

Client: CL Environmental

General Chemistry									
Client Sample ID:	AJ 8								
Lab Sample ID:	400-60147-8			Date S	ampled:	10/13/2011 1034			
Client Matrix:	Water			Date R	eceived	: 10/14/2011 1018			
Analyte	Re	sult Qual	Units	RL	Dil	Method			
Cyanide, Total	14		mg/L	0.25	50	335.2			
	Analysis Batch: 400-14198	Analysis Date	: 10/18/2011 1055						
	Prep Batch: 400-141761	Prep Date: 10	/14/2011 1510						

FDEP Facility No	reje Heybyt Kgn.9	VÓOD, FLORÍDA 33081-4407	Clarender				ED	IBER OF S BELOW. ACH TEST PERFORMED Sealed Yes No	Lot Number of Sampling Containers Used										rice guide for applicable fees)	(specify)	EQUESTED: #	α/T/D		IADED AREAS ARE FOR LAB USE ONLY
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Submission Code	Report To:	Bill To:	Project Number/Nam	Project Contact:	Alternate Contact:	Sampled By (print):	<u></u>	SAMPLE	≥ Page 22	P AJ	S A S	3 C	F.Y. +	2	e Br	LT .	o o	10	Special Comments:	emailre	(1) Relinquished by	Company:	(1) Received by Sigr	Company:

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Client: CL Environmental

Login Number: 60147

List Number: 1 Creator: Hor, Koma

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-60147-1

List Source: TestAmerica Pensacola



REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-60147-2 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-60147-2 Job Description: Ausjam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elvered

Approved for release. Marty Edwards Senior Project Manager 10/19/2011 4:23 PM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 10/19/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).





THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Austin 14050 Summit Drive, Suite A100 Austin, TX 78728 Tel: 512-244-0855

TestAmerica Job ID: AUJ0197

Client Project/Site: 400-60147-2 Client Project Description: Ausjam Gold Mine

For:

TestAmerica Pensacola 3355 McLemore Drive Pensacola, FL 32514

Attn: Marty Edwards

BW

Authorized for release by: 10/19/2011 04:10:57 PM

Ryan Maxson Project Manager Assistant Ryan.Maxson@testamericainc.com

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature. Page 1 of 22 10/19/2011

..... Links **Review your project** results through **Total**Access Have a Question? Ask-The Expert Visit us at: www.testamericainc.com

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Job ID: AUJ0197

Laboratory: TestAmerica Austin

Narrative

This report contains results for the samples received under chain-of-custody by TestAmerica Laboratories, Inc. 10/18/2011 9:45:00 AM .

These samples are associated with your Ausjam Gold Mine project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method specified acceptance criteria except where flagged on the result pages or noted in the case narrative.

If you should have any questions, please feel free to contact me at ryan.maxson@testamericainc.com or (512) 310-5335.

Definitions/Glossary

Client: TestAmerica Pensacola Project/Site: 400-60147-2

Glossary

ciccoury		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	Λ
☆	Listed under the "D" column to designate that the result is reported on a dry weight basis	 - T
%R	Percent Recovery	5
CNF	Contains no Free Liquid	J
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
EDL	Estimated Detection Limit	
EPA	United States Environmental Protection Agency	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
ND	Not detected at the reporting limit (or MDL or EDL if shown)	X
PQL	Practical Quantitation Limit	
RL	Reporting Limit	9
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	
		13
Detection Summary

TestAmerica Job ID: AUJ0197

Client Sample ID: AJ	1 (400-60147-1)					La	b Sample	ID: AUJ0197-01
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	162		5.00		ug/L	1.00	6020	Total
Client Sample ID: AJ	2 (400-60147-2)					La	b Sample	ID: AUJ0197-02
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	197		5.00		ug/L	1.00	6020	Total
Client Sample ID: AJ	3 (400-60147-3)					La	b Sample	ID: AUJ0197-03
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	152		5.00		ug/L	1.00	6020	Total
Client Sample ID: AJ	4 (400-60147-4)					La	b Sample	ID: AUJ0197-04
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	174		5.00		ug/L	1.00	6020	Total
Client Sample ID: AJ	5 (400-60147-5)					La	b Sample	ID: AUJ0197-05
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	5.11		5.00		ug/L	1.00	6020	Total
Client Sample ID: AJ	6 (400-60147-6)					La	b Sample	ID: AUJ0197-06
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	107		5.00		ug/L	1.00	6020	Total
Client Sample ID: AJ	7 (400-60147-7)					La	b Sample	ID: AUJ0197-07
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	104		5.00		ug/L	1.00	6020	Total
Client Sample ID: AJ	8 (400-60147-8)					La	b Sample	ID: AUJ0197-08
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Gold	113		5.00		ug/L	1.00	6020	Total

Sample Summary

Client: TestAmerica Pensacola Project/Site: 400-60147-2 TestAmerica Job ID: AUJ0197

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
AUJ0197-01	AJ 1 (400-60147-1)	Water	10/13/11 09:03	10/18/11 09:45
AUJ0197-02	AJ 2 (400-60147-2)	Water	10/13/11 09:13	10/18/11 09:45
AUJ0197-03	AJ 3 (400-60147-3)	Water	10/13/11 09:25	10/18/11 09:45
AUJ0197-04	AJ 4 (400-60147-4)	Water	10/13/11 09:38	10/18/11 09:45
AUJ0197-05	AJ 5 (400-60147-5)	Water	10/13/11 09:50	10/18/11 09:45
AUJ0197-06	AJ 6 (400-60147-6)	Water	10/13/11 10:20	10/18/11 09:45
AUJ0197-07	AJ 7 (400-60147-7)	Water	10/13/11 10:26	10/18/11 09:45
AUJ0197-08	AJ 8 (400-60147-8)	Water	10/13/11 10:34	10/18/11 09:45

Lab Sample ID: AUJ0197-01

Client Sample ID: AJ 1 (400-60147-1) Date Collected: 10/13/11 09:03 Date Received: 10/18/11 09:45

Method: 6020 - Total Metals by SW	846 Series M	lethods							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gold	162		5.00		ug/L		10/18/11 10:19	10/18/11 16:52	1.00

Lab Sample ID: AUJ0197-02

Client Sample ID: AJ 2 (400-60147-2) Date Collected: 10/13/11 09:13 Date Received: 10/18/11 09:45

	/846 Series M	lethods							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gold	197		5.00		ug/L		10/18/11 10:19	10/18/11 17:07	1.00

Lab Sample ID: AUJ0197-03

Client Sample ID: AJ 3 (400-60147-3) Date Collected: 10/13/11 09:25 Date Received: 10/18/11 09:45

Method: 6020 - Total Metals by SW	/846 Series M	lethods							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gold	152		5.00		ug/L		10/18/11 10:19	10/18/11 17:10	1.00

Lab Sample ID: AUJ0197-04

Client Sample ID: AJ 4 (400-60147-4) Date Collected: 10/13/11 09:38 Date Received: 10/18/11 09:45

Method: 6020 - Total Metals by SW	/846 Series N	lethods							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gold	174		5.00		ug/L		10/18/11 10:19	10/18/11 17:13	1.00

Lab Sample ID: AUJ0197-05

Client Sample ID: AJ 5 (400-60147-5) Date Collected: 10/13/11 09:50 Date Received: 10/18/11 09:45

_ Method: 6020 - Total Metals by SW	846 Series Methods						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Gold	5.11	5.00	ug/L		10/18/11 10:19	10/19/11 12:16	1.00

Lab Sample ID: AUJ0197-06

Client Sample ID: AJ 6 (400-60147-6) Date Collected: 10/13/11 10:20 Date Received: 10/18/11 09:45

Method: 6020 - Total Metals by SV	V846 Series N	lethods							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gold	107		5.00		ug/L		10/18/11 10:19	10/19/11 12:19	1.00

Lab Sample ID: AUJ0197-07

Client Sample ID: AJ 7 (400-60147-7) Date Collected: 10/13/11 10:26 Date Received: 10/18/11 09:45

Method: 6020 - Total Metals by SW	/846 Series N	lethods							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gold	104		5.00		ug/L		10/18/11 10:19	10/19/11 12:22	1.00

Lab Sample ID: AUJ0197-08

Client Sample ID: AJ 8 (400-60147-8) Date Collected: 10/13/11 10:34 Date Received: 10/18/11 09:45

Method: 6020 - Total Metals by SW	/846 Series N	lethods							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gold	113		5.00		ug/L		10/18/11 10:19	10/19/11 12:25	1.00

Client: TestAmerica Pensacola Project/Site: 400-60147-2

Method	Method Description	Protocol	Laboratory
6020	Total Metals by SW846 Series Methods		TAL AUS

Protocol References:

Laboratory References:

TAL AUS = TestAmerica Austin, 14050 Summit Drive, Suite A100, Austin, TX 78728, TEL 512-244-0855

Client Sampl	e ID: AJ 1 ((400-60147-1)					Lab Sample	ID: AUJ0197-0 [,]
Date Collected:	10/13/11 09:0	03						Matrix: Wate
Date Received:	10/18/11 09:4	45						
_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	Or Analyzed	Analyst	Lab
Total	Prep	3020A MS		5.00	11J0220 P	10/18/11 10:19	RHH	TAL AUS
Total	Analysis	6020		1.00	U000728	10/18/11 16:52	XBE	TAL AUS
Client Sampl	e ID: A.I 2 ((400-60147-2)					l ab Sample	
ate Collected		13						Matrix: Wate
ate Received:	10/18/11 09:4	45						
-	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	Or Analyzed	Analyst	Lab
Total	Prep	3020A MS		5.00	11J0220 P	10/18/11 10:19	RHH	TAL AUS
Total	Analysis	6020		1.00	U000728	10/18/11 17:07	XBE	TAL AUS
lient Sampl	e ID: A.I.3 ((400-60147-3)					l ah Sample	Π· ΔΙΙ.Ι0197-0
Data Collocted		25						Matrix: Wat
ate Conected.	40/49/44 00:4	25						
	10/10/11 09.4	+5						
	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	Or Analvzed	Analyst	Lab
Total	Prep	3020A MS		5.00	11J0220 P	10/18/11 10:19	RHH	TAL AUS
Total	Analysis	6020		1 00	U000728	10/18/11 17.10	XBE	TAL AUS
-	, analysis	0020		1.00	0000120		ABE	
Client Sampl	e ID: AJ 4 ((400-60147-4)					Lab Sample	ID: AUJ0197-04
Date Collected: Date Received:	: 10/13/11 09:: 10/18/11 09:4	38 45						Matrix: Wate
_	Patah	Patah		Dilution	Potoh	Bronarad		
	Tune	Mathad	Burn	Dilution	Daton		Amelyot	Lah
Trep Type	Type		Kun			Or Analyzed	Analyst	
	Prep	3020A MS		5.00	11J0220_P	10/18/11 10:19	RHH	TAL AUS
l otal	Analysis	6020		1.00	0000728	10/18/11 17:13	XBE	TAL AUS
Client Sampl	e ID: AJ 5 ((400-60147-5)					Lab Sample	ID: AUJ0197-0
Date Collected:	10/13/11 09:	50						Matrix: Wate
Date Received:	10/18/11 09:4	45						
_	Batch	Batch		Dilution	Batch	Prepared		
Pron Type	Type	Method	Pun	Eactor	Number	Or Analyzed	Analyst	lah
	Pren			<u>5.00</u>	11 10220 P	10/18/11 10:10		
Total	Analysis	6020A 100		1.00	1100220_1	10/10/11 10:15	VPE	
	Analysis	6020		1.00	0000728	10/19/11 12:16	XBE	TAL AUS
Client Sampl	e ID: AJ 6 (400-60147-6)					Lab Sample	ID: AUJ0197-0
Date Collected: Date Received:	: 10/13/11 10:2 10/18/11 09:4	20 45						Matrix: Wate
-		Batak		Dilectio	D-/ '	D		
	Batch	Batch	_		Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	Or Analyzed	Analyst	Lab
Total	Prep	3020A MS		5.00	11J0220_P	10/18/11 10:19	RHH	TAL AUS
Total	Analysis	6020		1.00	U000728	10/19/11 12:19	XBE	TAL AUS

Dilution

Factor

5.00

1.00

Run

Client Sample ID: AJ 7 (400-60147-7)

Client Sample ID: AJ 8 (400-60147-8)

Batch

Туре

Prep

Analysis

Date Collected: 10/13/11 10:34

Date Received: 10/18/11 09:45

9

Laboratory References:

Prep Type

Total

Total

TAL AUS = TestAmerica Austin, 14050 Summit Drive, Suite A100, Austin, TX 78728, TEL 512-244-0855

Batch

6020

Method

3020A MS

Lab Sam	ple ID:	AUJ0	197-07

Lab Sample ID: AUJ0197-08

Lab

TAL AUS

TAL AUS

Analyst

RHH

XBE

Matrix: Water

Date Collected Date Received	: 10/13/11 10:: : 10/18/11 09:4	26 45						Matrix: Water	
Pren Tyne	Batch	Batch Method	Run	Dilution	Batch	Prepared Or Analyzed	Analyst	Lah	5
Total	Prep			5.00	11J0220_P	10/18/11 10:19	RHH	TALAUS	
Total	Analysis	6020		1.00	U000728	10/19/11 12:22	XBE	TAL AUS	

Batch

Number

11J0220_P

U000728

Prepared

Or Analyzed

10/18/11 10:19

10/19/11 12:25

Metals

Analysis Batch: U000728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11J0220-BLK1	Method Blank	Total	Water	6020	11J0220_P
11J0220-BS1	Lab Control Sample	Total	Water	6020	11J0220_P
11J0220-MS1	AJ 1 (400-60147-1)	Total	Water	6020	11J0220_P
11J0220-MSD1	AJ 1 (400-60147-1)	Total	Water	6020	11J0220_P
11J0220-PS1	AJ 1 (400-60147-1)	Total	Water	6020	11J0220_P
AUJ0197-01	AJ 1 (400-60147-1)	Total	Water	6020	11J0220_P
AUJ0197-02	AJ 2 (400-60147-2)	Total	Water	6020	11J0220_P
AUJ0197-03	AJ 3 (400-60147-3)	Total	Water	6020	11J0220_P
AUJ0197-04	AJ 4 (400-60147-4)	Total	Water	6020	11J0220_P
AUJ0197-05	AJ 5 (400-60147-5)	Total	Water	6020	11J0220_P
AUJ0197-06	AJ 6 (400-60147-6)	Total	Water	6020	11J0220_P
AUJ0197-07	AJ 7 (400-60147-7)	Total	Water	6020	11J0220_P
AUJ0197-08	AJ 8 (400-60147-8)	Total	Water	6020	11J0220_P

Prep Batch: 11J0220_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11J0220-BLK1	Method Blank	Total	Water	3020A MS	
11J0220-BS1	Lab Control Sample	Total	Water	3020A MS	
11J0220-MS1	AJ 1 (400-60147-1)	Total	Water	3020A MS	
11J0220-MSD1	AJ 1 (400-60147-1)	Total	Water	3020A MS	
11J0220-PS1	AJ 1 (400-60147-1)	Total	Water	3020A MS	
AUJ0197-01	AJ 1 (400-60147-1)	Total	Water	3020A MS	
AUJ0197-02	AJ 2 (400-60147-2)	Total	Water	3020A MS	
AUJ0197-03	AJ 3 (400-60147-3)	Total	Water	3020A MS	
AUJ0197-04	AJ 4 (400-60147-4)	Total	Water	3020A MS	
AUJ0197-05	AJ 5 (400-60147-5)	Total	Water	3020A MS	
AUJ0197-06	AJ 6 (400-60147-6)	Total	Water	3020A MS	
AUJ0197-07	AJ 7 (400-60147-7)	Total	Water	3020A MS	
AUJ0197-08	AJ 8 (400-60147-8)	Total	Water	3020A MS	

Lab Sample ID: 11J0220-BLK1 Matrix: Water Analysis Batch: U000728											C	lient Sa	ample ID: M Pre Prep Batcl	Method p Type: n: 11J0	Blank Total 220 P
	в	lank	Blank												
Analyte	Re	esult	Qualifier		RL	м	IDL	Unit		D	Pre	pared	Analyze	d	Dil Fac
Gold		ND			1.00			ug/L			10/18/	11 10:19	10/18/11 1	6:47	1.00
Lab Sample ID: 11J0220-BS1										Cli	ient S	Sample	ID: Lab Co	ntrol Sa	ample
Matrix: Water												- i -	Pre	p Type:	Total
Analysis Batch: U000728													Prep Batcl	n: 11J0	220 P
-				Spike		LCS	LC	s					% Rec.		_
Analyte				Added		Result	Qu	alifier	Unit		D	% Rec	Limits		
Gold				50.00		42.2			ug/L			84	80 - 120		
Lab Sample ID: 11J0220-MS1										c	Client	t Sample	e ID: AJ 1 (400-60	147-1)
Matrix: Water													Pre	o Type:	Total
Analysis Batch: U000728													Prep Batcl	n: 11J0	220 P
	Sample	Sam	ple	Spike	Mat	rix Spike	Ma	trix Spike	Ð				% Rec.		_
Analyte	Result	Qual	lifier	Added		Result	Qu	alifier	Unit		D	% Rec	Limits		
Gold	162			250.0		462			ug/L			120	75 _ 125		
Lab Sample ID: 11J0220-MSD1										c	Client	Sample	e ID: AJ 1 (400-60	147-1)
Matrix: Water													Pre	o Tvpe:	Total
Analysis Batch: U000728													Prep Batcl	n: 11J0	220 P
•	Sample	Sam	ple	Spike	Matrix S	pike Dup	Ma	trix Spike	e Dur				% Rec.		RPD
Analyte	Result	Qual	lifier	Added		Result	Qu	alifier	Unit		D	% Rec	Limits	RPD	Limit
Gold	162			250.0		436			ug/L			109	75 - 125	6	20

Certification Summary

Client: TestAmerica Pensacola Project/Site: 400-60147-2

TestAmerica Job ID: AUJ0197

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Austin	Arkansas	State Program	6	88-0685
TestAmerica Austin	California	State Program	9	2411
TestAmerica Austin	Kansas	NELAC	7	E-10165
TestAmerica Austin	Louisiana	NELAC	6	30736
TestAmerica Austin	North Carolina	North Carolina DENR	4	302
TestAmerica Austin	Oklahoma	State Program	6	8720
TestAmerica Austin	Pennsylvania	NELAC	3	68-04085
TestAmerica Austin	South Carolina	State Program	4	82003
TestAmerica Austin	Texas	NELAC	6	T104704217-11-9
TestAmerica Austin	USDA	USDA		P330-08-00046

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Test	Americ	a – Austin La	boratory Ch	ain of Custo	dy Addendu	m Work	Order Nun	nber <u>A45019</u> 7
RECE	IVED B	Y: 12 U	<u> </u>	CLIEN	TT: TAP	ensa cole	₹.	
DATE	/TIME R	ECEIVED: 10	118/11 094	5 PROJE	ест: <u>Дист</u>	am Gold	Mine	
UNPA	CKED I	DATE/TIME: <u>(</u> 8	118/11 100	<u>o</u> LOGI	N BY: RT	LOGIN I	REVIEWED E	BY: <u>NS</u>
Numb VOC	er of Shij SAMPL	pping Containers	Received with ((IF)	COC: [YES, GO TO SE	ECTIONS 1.0, 2.0	, 6.0, & 7.0)		
1.0 C	ONTAIN	ERS EXAMIN	ED UPON REC	CEIPT:	RL.			
Conta If seal	iner Seale not intac	ed: YES	NO Custody S ber of that conta	Seal Present:	₽YES □ NO	Custody Seal	Signed/Dated:	VES NO
2.0 V	DC CAN	ISTERS EXAN	IINED UPON H	RECEIPT:				
Canist	er Valve	s Closed:	YES	□no	Canist	- er Valves Capp	ed:	YES NO
Sampl	e IDs ma	tch COC:	∐ YES	□ NO	Other	Equipment Rec	eived:	YES NO
Valve	Cap Tigl	itened Properly:	U YES		Can S	ize: 6L	1L Other:	
Sampl	es receiv	al Used: (circle) ed in Tedlar bag	None / Absorbe s $\Box N$	A Paper / Bu	Dole wrap			
3.0 C	ONDITI	ON OF BOTTL	ES/CONTAINI	ERS	VERIFIED	sv: R	ζ,	
Sampl	e IDs ma	tch COC:		YES []	NO Bottles rec	ceived intact:		YES NO
See ad	lditional o	discrepancies/con	mments section:	YES V	NO Samples r	eceived from U	SDA restricted	l area: YES YNO
Chain	-of-Custo	dy form properly	y maintained:	YES []	NO VOA trip	blanks included	: [N/A YES NO
4.0 SA	MPLE '	FEMPERATUF	RE UPON REC	EIPT BY:		IR THERMO	METER #:	₽75 □P7
Conta	iner(s) ter	mperature: TB =	Temp. Blank and	or SC = Sample	$\frac{\text{Container } CF = C}{TP - CC}$	orrection Factor		ble tolerance ≤6°C]
Initial	19.4	Initial	Initial	Initial	Initial		Initial	Initial
CF	-0.3	CF	CF	CF	CF	CF	CF	CF
Final	19.1	Final	Final	Final	Final	Final	Final	Final
If tem	perature i	is outside accepta	able tolerance, P	roject Manager	was notified (PM). D	ate:	Time:
Sampl	es receiv	ed do not require	cooling <u><i>KL</i></u>	<u> </u>		OK to and	alyze samples:	YES NO
5.0 PI PRES	RESERV ERVATI(JOTE: pl	ATION CHEC DN OF SAMPLE H CHECK OF SA	KS S REQUIRED: AMPLES PERFO	N/A	YES 🗌 VOA S TE OF ANALYSI	amples VEI S BY BENCH A	RIFIED BY: _ NALYST	PL.
	p]	H CHECK OF VO	OLATILE SAMP	LES PERFORM	MED AFTER AN	ALYSIS BY TH	E BENCH ANA	ALYST.
Cyani	de sample	es checked for su	ılfides:		TES 🗌 NO			
Sulfid	e sample	s appear to be pro	eserved with zine	c acetate:	YES 🗌 NO			
Chlori	ne check	ed per specificat	ion (EPA 335.x	& N.C.)	TES INO	Free chlor	rine present:	🗌 YES 🗌 NO
Volati	ervation le sample	is outside accept	able limit, PM n	onned (NO [if no,]	PM) ist ID and approx	Date/11m amt. of headsr	e: pace (>6mm) i	n Comments Section 7.01
	-							1
6.0 SH	IPPING	DOCUMENTA	TION:					
Air/ire	gnt Dill 19	S available and al	tached to COC:	VYES _	NO Air bill #:	Deter	·····	
						Date:	1 i	me:
7.0 OT	HER CO	OMMENTS:						
	A							
•••••••								
	DDECT							
8.0 CU	Nomo	IVE ACTION:		Informed work	llu on		D	
Client'	s Name:			Informed verba	ally on:		By:	
Sample	(s) proce	ssed "as is" com	ments:					

Sample	s(s) on he Manager	old until:	ew: Po	$1\sqrt{1}$	If rel	eased, notify:	Date: 10	/19/11
roject	wianagei	nom Login Kevi		~~			Date	· · / · · ·
SIGNE	ED ORIGI	NAL MUST BE R	ETAINED IN TH	E PROJECT FIL	Æ	Rev	rised 07/26/11	

2 3 4 5 6 7 8 9	10 11	12 13														
TestAmerica Pensacola 3355 McLemore Drive Pensacola, FL 32514	Aus	FV03	Chain	of C	usto	dy R	ecor	Q .					: n 1	estA	NURONI	Shica
	Sampler:		ΠE	ib PM: riwards, N	VheN				Carrier	Fracking	No(s):		4 8)C No: 0-13195.1		
Client Contact: Client Contact: Shinninn/Receiving	Phone:		<u>ع</u> ښ	Mail: arty.edwa	ards@tes	tamerica	inc.com						Pag	^{ge:} Ige 1 of 1		
Company: TostAmerica aboratories nc							Analys	is Rec	queste	ä.			40 40	5# 0-60147-2		
Address: 14050 Summit Drive, Suite A100,	Due Date Requester	11 20 01 #												HCL	ides: M - He	Kane
City: Austin	TAT Requested (da)	(<u>s</u>):	2 10	- Maile									<u>ەن م</u>	- NaOH - Zn Acetate	0- As	
State, Zip: TX, 78728	<u> </u>	and line	ک										<u>י</u> י ה כ	- Nitric Acid - NaHSO4 MeOH	R - Na	2045 2SO3 3S2SO3
Phone:	PO#)									ŦΘ.	- Amchlor - Ascorbic Acid	S-H2	304 2 Dodecahydrate
Email:	WO#			s or N No)									1 78 5	DI Water		AA AA
Project Name: Ausjam Gold Mine	Project #: 40001189			le (Ye 'es or									ntain:	EDA	Z - oth	er (specify)
Site:	SSOW#:			Samp ISD ()									r of co	ner:		
		Sa	mple Matrix vne (w=water,	iltered m MS/N	iold								Numbe			
Sample Identification - Client ID (Lab ID)	Sample Date	Sample (C= Time G=	Comp, O=wastaloi grab) BT=Tlasue, A=	Field Perfo	6020 (native state			Total	Special In	nstructi	ons/Note:
	X		eservation Code	X				200 200 200			1		X		A SULPHY REPORT	
AJ 1 (400-60147-1)	10/13/11	U9:03 Eastern	Water		×											
AJ 2 (400-60147-2)	10/13/11	09:13 Eastern	Water		×											
AJ 3 (400-60147-3)	10/13/11	09:25 Eastern	Water	-	×								<u> </u>			
AJ 4 (400-60147-4)	10/13/11	09:38 Eastern	Water		×				ļ							
AJ 5 (400-60147-5)	10/13/11	09:50 Eastern	Water		×											
AJ 6 (400-60147-6)	10/13/11	10:20 Eastern	Water		×								<u></u>			
AJ 7 (400-60147-7)	10/13/11	10:26 Eastern	Water		×						<u> </u>					
AJ 8 (400-60147-8)	10/13/11	10:34 Eastern	Water		×								<u>د ا</u>			
				F				.			-					
Possible Hazard Identification		wn Radio	logical	Sa	Retu	n To Cli	A ree m ant)isposa	n n sa By Lai) Inpres		chive .	For	Moi	ths
Deliverable Requested: I, II, III, IV, Other (specify)	-			lsp	ecial Ins	ructions	QC Req	uiremer	nts:							
Empty Kit Relinquished by:		Date:		Time:					м	athod of S	Shipment					
Relinquished by:	Date/Time:	()?	7から Company		Received	5	Å.	ľ			Date/Tin (0/	18/0		0945	1 The	- Austin
Relinquished by:	Date/Time:		Company		Received	by:					Date/Tim	<u>9</u>			Compa	iny
Relinquished by:	Date/Time:		Company		Received	by:					Date/Tim	e.			Сотра	ny
Custody Seals Intact: Custody Seal No.: <u>A</u> Yes <u>A</u> No					Cooler To	mperature	(s) [®] C and	Other Re	emarks:							

Page 22 of 22

60(47) FDEP Facility Noof	Pink - Sampler Copy	- George Heybot Kgn.9	HOLLYWOOD, FLORIDA 33087-4407	ite Location: Clarender				S REQUIRED	METHOD NUMBER OF LARGE BOXES BELOW. TEMS NEED EACH TEST PERFORMED Seated Yas No	Lot Number of Sampling Containers Used										No (See price guide for applicable fees)	Other (specify)	DUE DATE REQUESTED: Confirmation #	Coating Code: Q. / L. / D.	Misc. Charges	SHADED AREAS ARE FOR LAB USE ONLY
GROUP ((00- (00 (modified form)) DOD, FLORIDA 33021 LAR: 954-494-3272		= 22 tart	P.O. BOX 814407,	S	7560338	0 7	Ire MM	ANALYSIS	PLACE NAME OR I TESTS NEEDED IN) CHECK OFF WHICH SAMPLE II	de Gold Silver	>			\ \ \)			eport Needed?: Yes	ormat: Standard	Date:	Time:	Date: 0-14-1	Time: 1 & 1 &
ANALYTICAL RD (DEP 62-770.90 SUITE 301, HOLLYW 4-894-4501 • CELLU	w - Lab Copy	Report To Addres	Billing Address:		7 FAX: \$76	FAX:	Sampler's Signati	# /NC		ns) R Total S Rani	3	5	2	~ (<u>х</u> 2	2)	<u>></u>		s: 24 aAac R	A I Report Fo			N	
ERNATIONAL CUSTODY RECOF 00D BOULEVARD, (4-894-4023 • FAX: 95	Yello	11	(AG)		6 371 2267	6 439 958		X SAMPLE LOCATIC	(optional if neede when samples are f	different site locatio	/			~					-	Total # of Container	maica. con	inquished by Signature:	any:	ceived by Signature:	any:
AIN OF O HOLLYW		AUPES	SOUP (I		Phone: 87	hone: 87		MATRI	SED V O	ο HA HA	Sh	SW	32	ير کر	S E	Stv	2 K	3			CWD		Compa	(2) Rec	Compa
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line in the second s		To: Math	EN	Number/Name:	Contact: C. C.	te Contact: M_ L	d By (print):		SAMPLE ID		AJ I	AT 2	A13	AJ 4	AJ S	AJ 6	AJ 7	AJ X		Comments:	ail resul-	nquished by Signature		sived by Signature:	:VL
ubmissi rders:		Report ⁻	Bill To:	Project	Project	Alternat	Sample	<u></u>	— — ш	<u> </u>		2	 	4	£		7		6 0	Special t	ene	(1) Relir	Compan	1) Rece	Compan

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REVIEW OF ANALYTICAL REPORT

JOB NUMBER: 400-60147-3 AUSJAM GOLD MINE

International Analytical Group, Inc. (IAG) has conducted an independent, third party review of the above referenced analytical report. The samples were analyzed by Test America Pensacola, a NELAC certified laboratory in Pensacola, Florida.

If you have any questions regarding this analytical report, please contact Maria Jackson at <u>maria@iagenvironmental.com</u> or (954) 894-4023.



ANALYTICAL REPORT

Job Number: 400-60147-3 Job Description: Ausjam Gold Mine

For: CL Environmental 22 Fort George Heights Stony Hill, Kingston 8, Jamaica Attention: Carlton Campbell

Marty Elwared

Approved for release. Marty Edwards Senior Project Manager 10/26/2011 3:59 PM

Marty Edwards Senior Project Manager marty.edwards@testamericainc.com 10/26/2011

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc. TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514 Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com



METHOD SUMMARY

Client: CL Environmental	Job Number: 400-60147-3

Description	Lab Location	Method	Preparation Method
Matrix Water			
Free Cyanide Cyanide: Distillation	TAL MOB	SM 4500 CN I	SM SM 4500 CN C
Lab References:			
TAL MOB = TestAmerica Mobile			

Method References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

METHOD / ANALYST SUMMARY

Job Number: 400-60147-3

Method

SM 4500 CN I

Hollins, Shelinda D

Analyst

Analyst ID SDH

Client: CL Environmental

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
400-60147-1	AJ 1	Water	10/13/2011 0903	10/14/2011 1018
400-60147-2	AJ 2	Water	10/13/2011 0913	10/14/2011 1018
400-60147-3	AJ 3	Water	10/13/2011 0925	10/14/2011 1018
400-60147-4	AJ 4	Water	10/13/2011 0938	10/14/2011 1018
400-60147-5	AJ 5	Water	10/13/2011 0950	10/14/2011 1018
400-60147-6	AJ 6	Water	10/13/2011 1020	10/14/2011 1018
400-60147-7	AJ 7	Water	10/13/2011 1026	10/14/2011 1018
400-60147-8	AJ 8	Water	10/13/2011 1034	10/14/2011 1018

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 1						
Lab Sample ID:	400-60147-1				I	Date Sample	d: 10/13/2011 0903
Client Matrix:	Water				I	Date Receive	ed: 10/14/2011 1018
Analyte	Re	esult	Qual	Units	RL	Dil	Method
Cyanide, Free	0.9	99		mg/L	0.10	10	4500 CN I
	Analysis Batch: 700-1079	36	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-107880		Prep Date: 10/2	25/2011 1230			

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 2						
Lab Sample ID:	400-60147-2				I	Date Sample	d: 10/13/2011 0913
Client Matrix:	Water				I	Date Receive	d: 10/14/2011 1018
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Free		1.1		mg/L	0.10	10	4500 CN I
	Analysis Batch: 700-1	07936	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-1078	80	Prep Date: 10/2	25/2011 1230			

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 3						
Lab Sample ID:	400-60147-3					Date Sampled	1: 10/13/2011 0925
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Free		1.3		mg/L	0.10	10	4500 CN I
	Analysis Batch: 700-10	7936	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-10788	80	Prep Date: 10/2	25/2011 1230			

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 4						
Lab Sample ID:	400-60147-4					Date Sampled	I: 10/13/2011 0938
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018
Analyte	R	Result	Qual	Units	RL	Dil	Method
Cyanide, Free	0	.95		mg/L	0.010	1.0	4500 CN I
	Analysis Batch: 700-1079	936	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-107880		Prep Date: 10/2	25/2011 1230			

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 5						
Lab Sample ID:	400-60147-5					Date Sampled	I: 10/13/2011 0950
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018
Analyte	R	esult	Qual	Units	RL	Dil	Method
Cyanide, Free	0.	.078		mg/L	0.010	1.0	4500 CN I
	Analysis Batch: 700-1079	936	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-107880		Prep Date: 10/2	25/2011 1230			

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 6						
Lab Sample ID:	400-60147-6				D	ate Sample	d: 10/13/2011 1020
Client Matrix:	Water				E	ate Receive	d: 10/14/2011 1018
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Free		2.1		mg/L	0.10	10	4500 CN I
	Analysis Batch: 700-1	07936	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-1078	80	Prep Date: 10/2	25/2011 1230			

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 7						
Lab Sample ID:	400-60147-7				[Date Sample	d: 10/13/2011 1026
Client Matrix:	Water				I	Date Receive	d: 10/14/2011 1018
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Free		1.8		mg/L	0.10	10	4500 CN I
	Analysis Batch: 700-10	7936	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-10788	30	Prep Date: 10/2	25/2011 1230			

Client: CL Environmental

			Gene	eral Chemistry			
Client Sample ID:	AJ 8						
Lab Sample ID:	400-60147-8					Date Sampled	I: 10/13/2011 1034
Client Matrix:	Water					Date Receive	d: 10/14/2011 1018
Analyte		Result	Qual	Units	RL	Dil	Method
Cyanide, Free		0.93		mg/L	0.010	1.0	4500 CN I
	Analysis Batch: 700-10	07936	Analysis Date:	10/25/2011 1507			
	Prep Batch: 700-10788	30	Prep Date: 10/2	25/2011 1230			

OLUC FDEP Facility No.	Sampling CompQAP No Approval Date:	Pink - Sampler Copy	George Heykt Kgn.9	IOLLYWOOD, FLORIDA 33087-4407	Location: Clarter der					ETHOD NUMBER OF RIGE BOXES BELOW. MS NEED EACH TEST PERFORMED Sealed Yes No	Lot Number of Sampling Containers Used										to (See price guide for applicable fees)	Other (specify)	UE DATE REQUESTED: onfirmation #	oating Code: Q / L / D	iso. Charges	SHADED AREAS ARE FOR LAB USE ONLY
GROUP 14 00- 6 0 (modified form))	0d, Florida 33021 Ar: 954-494-3272	F	22-Fart	P.O. BOX 814407, H	Site	7560338	0 7	· Mh	ANALYSIS	PLACE NAME OR ME TESTS NEEDED IN LA CHECK OFF WHICH SAMPLE ITE	le Gold Silver	/	<u>\</u>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~)			port Needed?: Yes N	mat: Standard	Date: DI Co	Time:	Date: 0-14-1	Time: 1 <i>0</i> ,.(ら
ANALYTICAL (D (DEP 62-770.90	UITE 301, HOLLYWO 4-894-4501 • CELLUL	/ - Lab Copy	Report To Address	Billing Address:		FAX: \$76	f FAX:	Sampler's Signatur	# Z	€ _ E	IS) A TOTAL	~ ~	3	3	\$ `)	2	2 2 2)	2 2 2		: 24 avac Re	Report For			M	
ERNATIONAL USTODY RECOR	00D BOULEVARD, S -894-4023 • FAX: 954	Yellow	10	AG)		5371 2267	5 439 95 84		SAMPLE LOCATION	(optional if needed when samples are fro	different site location										Total # of Containers	naica. com	nquished by Signature:	.Xi	eived by Signature:	N:
AIN OF C	HOLLYWC HONE: 954		280 m	OUP (I/		hone: 876	hone: 871		MATRIX	S G W S M	α BIO EFF α	SW	SW	32	SU	S U S	SE	SΨ	ЗV		-	CW lan	2) Relir	Compan	(2) Rece	Compan
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in Coase	to lims.	<u> </u>	To: Matthe	INTE	Number/Name:	Contact: C. Con	te Contact: M_ C	d By (print):		SAMPLE ID		AJ I	AJ 2	A13	AJ 4	AJ S	AJ 6	AJ 7	AJ &		Comments:	ail result	nquished by Signature:	C.L. EV	eived by Signature:	:Yr
Submiss	Orders: Entered 1		Report	Bill To:	Project	Project	Alterna:	Sample		—нш)	≥ Page 13	of	đi	 5 ო	4	ы	9	7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	6 Q	Special	eri	(1) Relii	Compar	(1) Rec	Compar

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Client: CL Environmental

Login Number: 60147

List Number: 1 Creator: Hor, Koma

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-60147-3

List Source: TestAmerica Pensacola

Client: CL Environmental

Login Number: 60147 List Number: 1

Creator: Isbell, Glenn

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
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There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 400-60147-3

List Source: TestAmerica Mobile List Creation: 10/20/11 12:12 PM